A330-200/300
TECHNICAL TRAINING MANUAL
MAINTENANCE COURSE - T1 (LVL 2&3) (RR Trent 700)
DOORS

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DOORS

Doors Line Maintenance Briefing (2) 2

EMERGENCY EXITS

Passenger Door Control Mechanism D/O (3) 52
Doors Escape Facility Release Mechanism D/O (3) 64

CARGO DOORS

Forward and AFT Cargo Doors D/O (3) 74
Cargo Doors Bulk Operation D/O (3) 82
Cargo Doors Locking Mechanism D/O (3) 86
Cargo Doors FWD and AFT Hydraulic System D/O (3) 98

COCKPIT DOOR

Cockpit Doors D/O (3) 126

DOOR AND SLIDE CONTROL

Door & Slide Control System PAX/Crew Door D/O (3) 140
DSCS Forward and AFT Cargo Door D/O (3) 156
DSCS Bulk Cargo & Avionics COMPT Doors D/O (3) 168

MAINTENANCE PRACTICE

Doors System Base Maintenance (3) 170

G7508471 - G3NT1T0

DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW

The doors system has:
- the cabin doors,
- the cockpit door,
- the cargo doors,
- the avionics compartment doors,
- the Doors and Escape Slides Control System (DSCS).

When you operate on the doors system, you must obey all the safety procedures listed in the AMM.

PASSENGER AND EMERGENCY DOORS LOCKING SYSTEM

Door locking/unlocking can be done either from the inner handle or the outer handle. Both handles operate a mechanical linkage to help in all the door movements: Lowering, lifting and outward opening. Two locking hooks located on the upper edge and a locking shaft lock the door.

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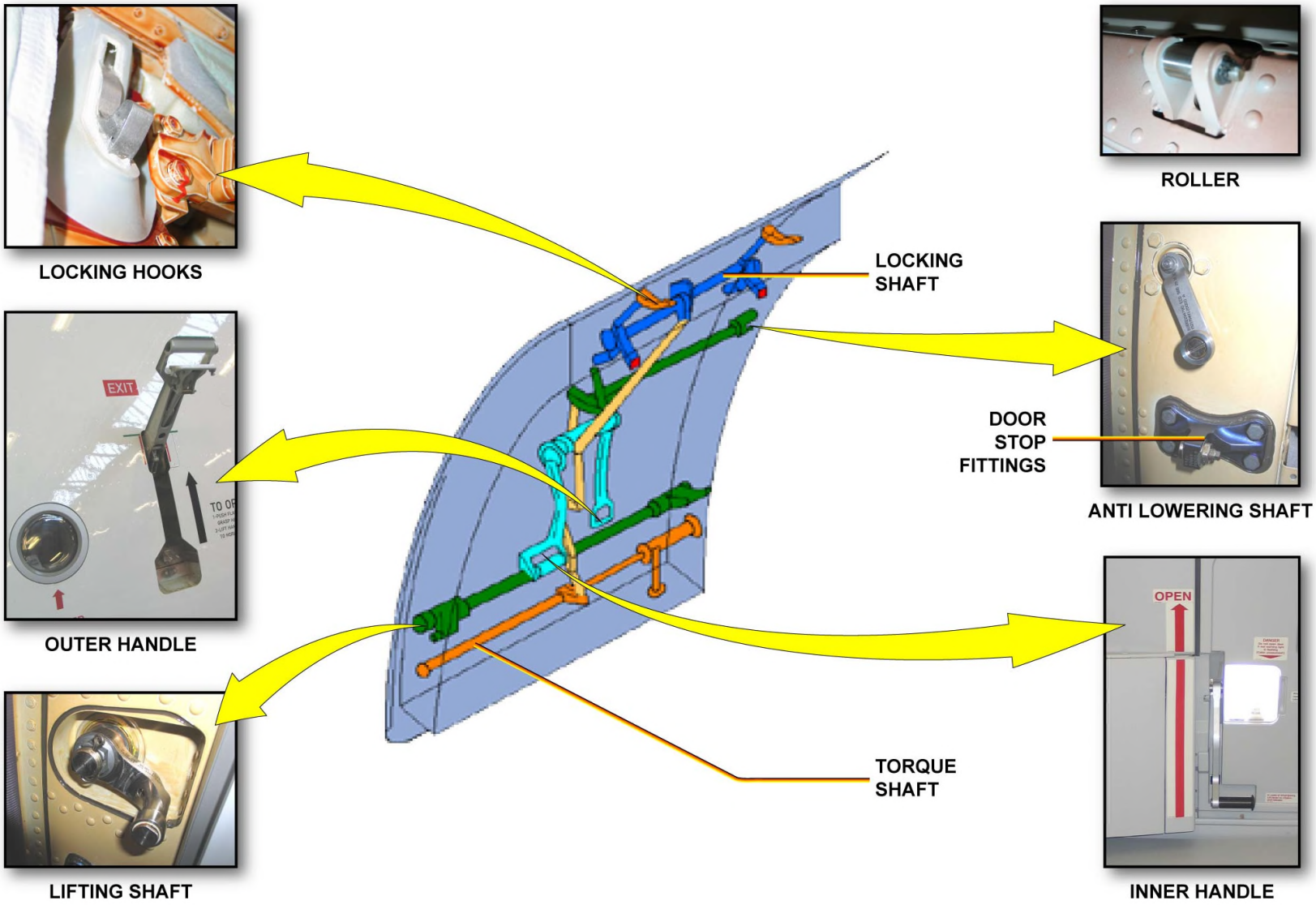

SYSTEM OVERVIEW - PASSENGER AND EMERGENCY DOORS LOCKING SYSTEM

DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

PASSENGER AND EMERGENCY DOORS EMERGENCY SYSTEM

The emergency system has:
- an arming lever controlling the girt bar,
- a damper and emergency-operation cylinder,
- an escape slide/raft packed into a container installed at the bottom of the door.

In DISARMED mode, the mechanical linkage secures the girt bar to the door. The damper and emergency-operation cylinder damps the door movement.

In ARMED mode, the arming mechanical linkage attaches the girt bar to the structure in order to deploy the escape slide/raft during the opening.

The damper and emergency-operation cylinder opens the door automatically when the handle is raised to let the escape slide/raft deploy in ARMED mode.

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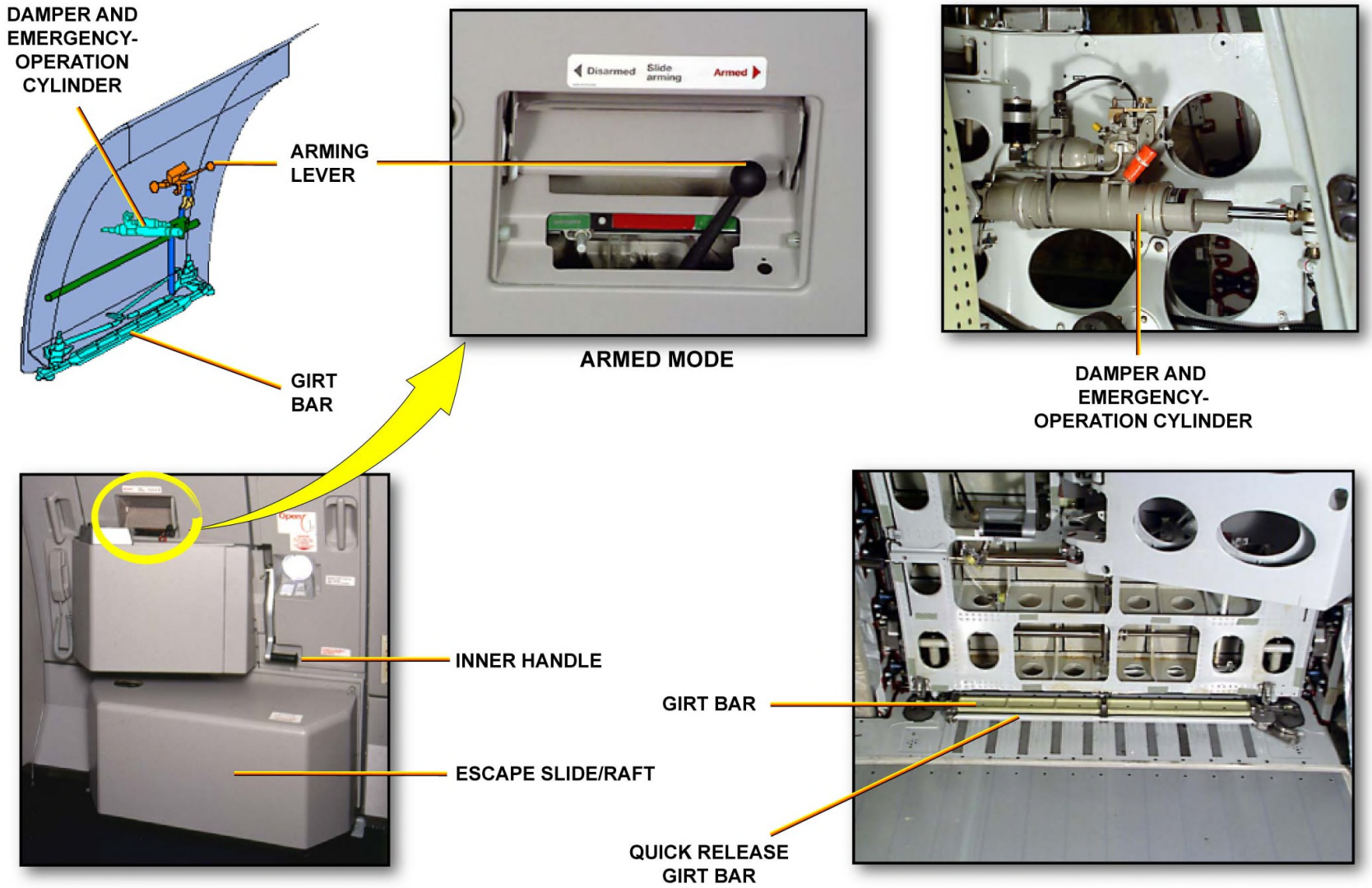


SYSTEM OVERVIEW - PASSENGER AND EMERGENCY DOORS EMERGENCY SYSTEM

DOORS LINE MAINTENANCE BRIEFING (2)

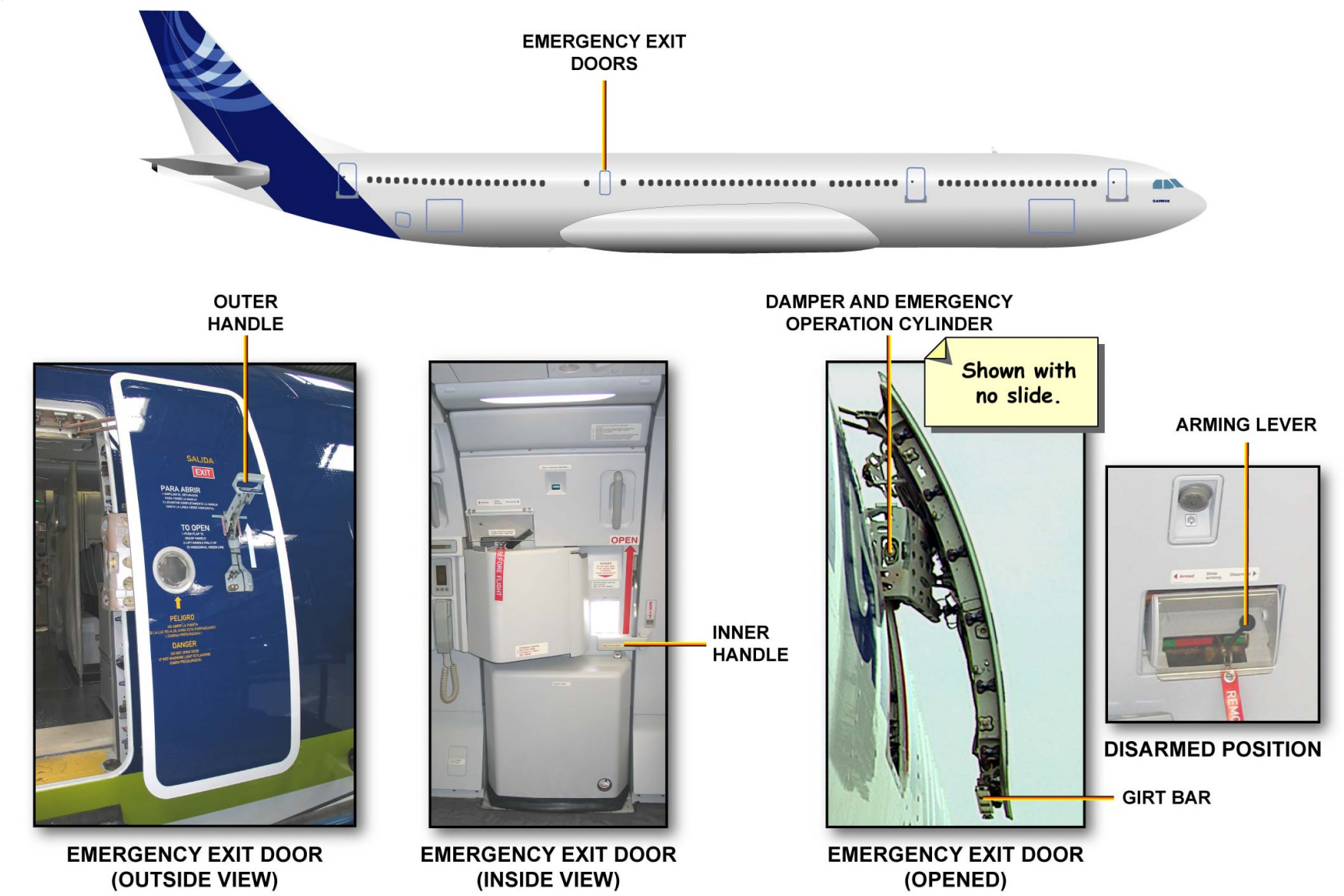
SYSTEM OVERVIEW (continued)

EMERGENCY EXITS LOCKING SYSTEM

Door locking/unlocking is initiated either from the outer handle or the inner handle. Only one locking hook is operated. It is the same type of mechanical linkage as the type A passenger doors. The emergency system has an arming lever operating a girt via a mechanical linkage.

NOTE: The escape slide/raft is packed into a container installed at the bottom of the door.

The damper and emergency-operation cylinder work also as a damper in disarmed mode or as an emergency-operation cylinder in armed mode.



SYSTEM OVERVIEW - EMERGENCY EXITS LOCKING SYSTEM

DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

CARGO DOORS

The aircraft has three cargo compartment doors installed on the lower right hand side of the fuselage. The three doors give access to the cargo compartments:
- the FWD and aft doors are hydraulically operated,
- the bulk cargo door is manually operated.

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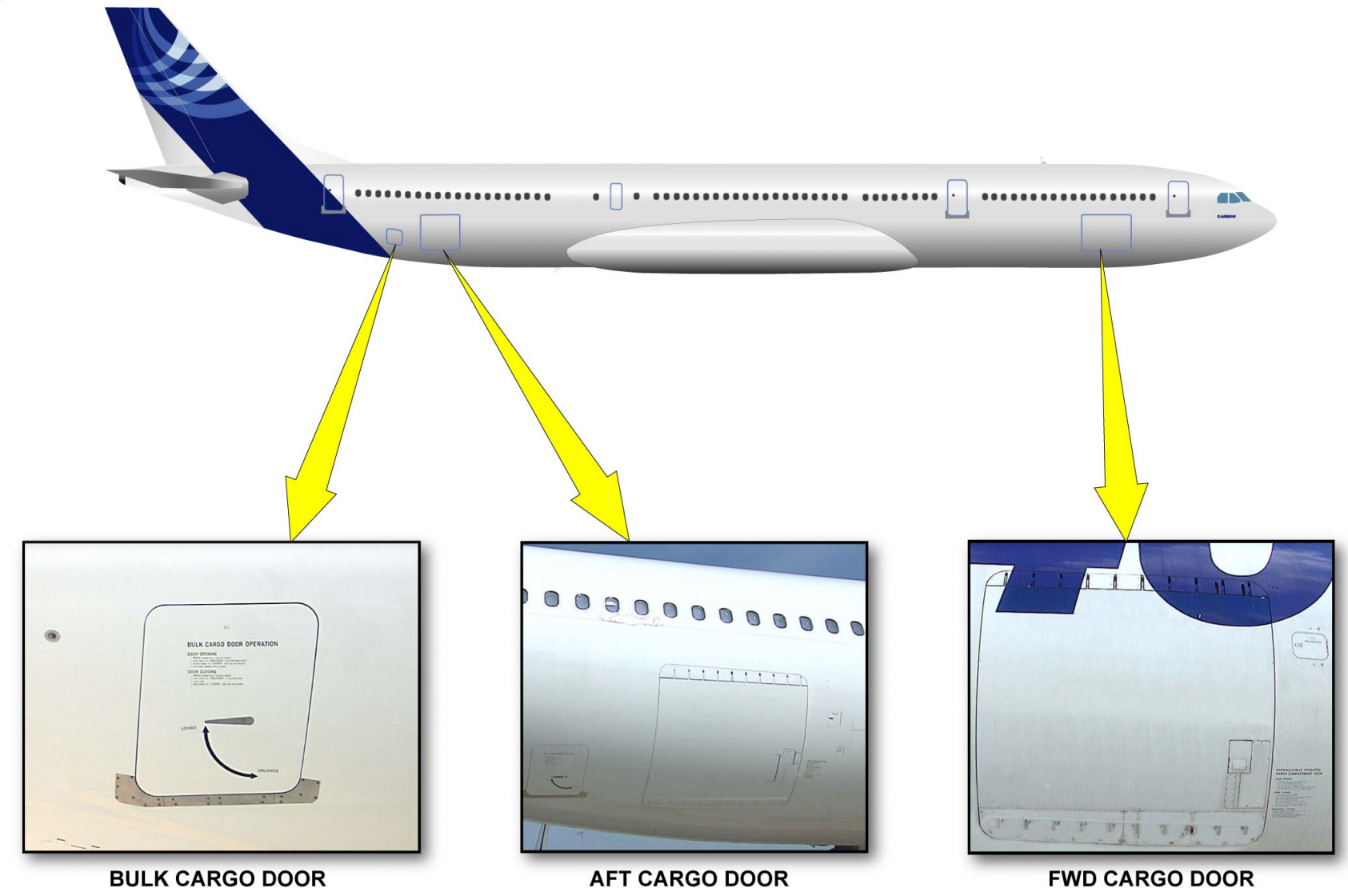


SYSTEM OVERVIEW - CARGO DOORS

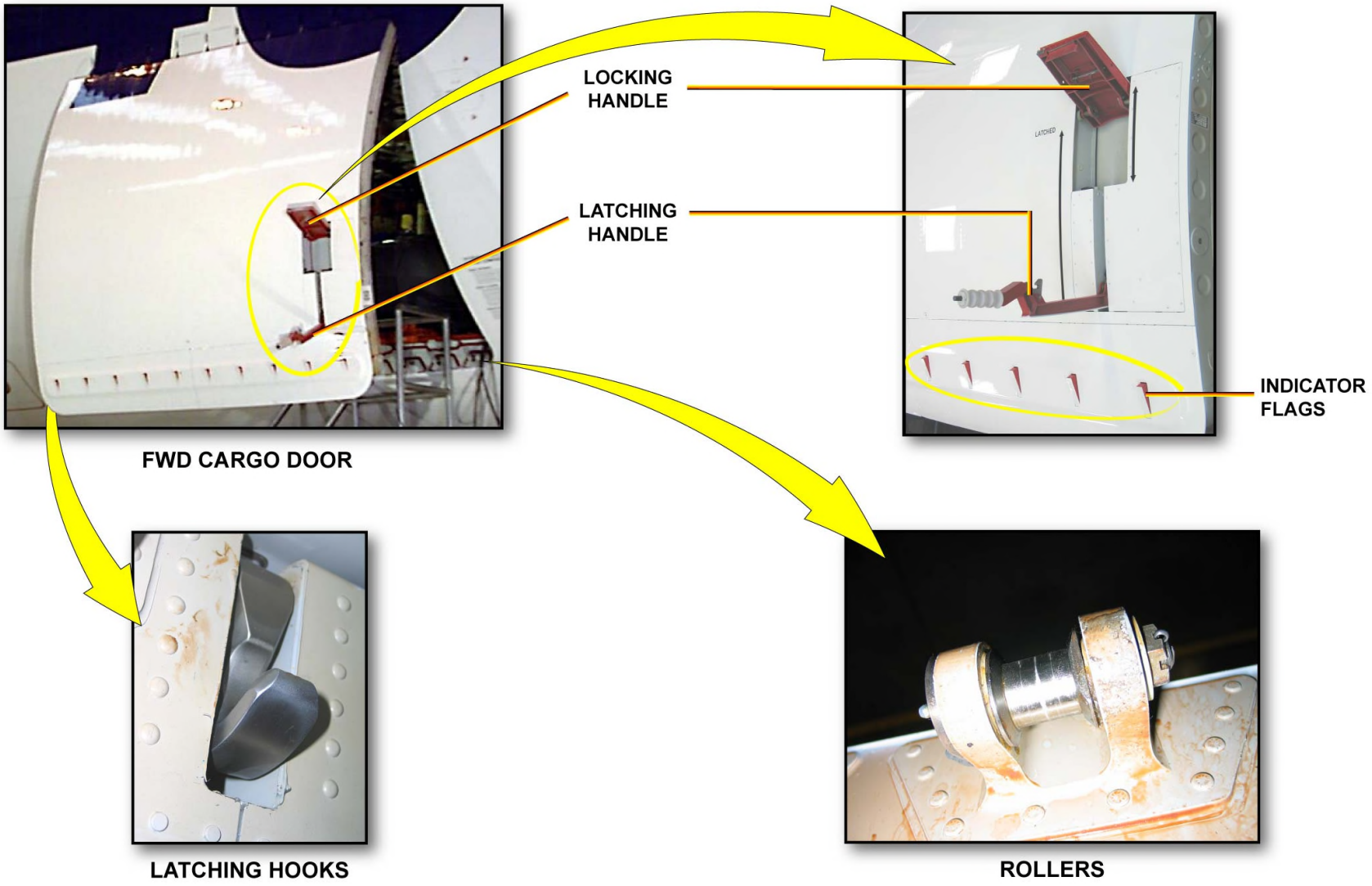
DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

CARGO DOORS LOCKING AND LATCHING

The door has:
- a locking handle,
- a latching handle.

The locking handle gives a safety by securing the hooks in the latched position. It operates a locking shaft, which secures the latching shaft, when the hooks are engaged with the rollers. When the locking handle is in the unlocked position it gives access to the latching handle. Indicator flags extrude from the door skin if the locking system is not in the fully locked position. A catch pin safeties the latching handle in the fully latched position. A P/B on the latching handle must be pressed to release the catch. The cargo door will then leave the fuselage frame under gravity.



SYSTEM OVERVIEW - CARGO DOORS LOCKING AND LATCHING

DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

CARGO DOORS HYDRAULIC OPERATION

The FWD and aft cargo doors open outwards and upwards from the fuselage and are manually locked/unlocked and hydraulically operated.
The door system comprises:
- a cargo door selector to select the opening or closing of the door,
- a green indicator light to indicate that the door is fully open and locked,
- a hydraulic actuator to open and close the door and to lock it mechanically when the door is fully open,
- a locking handle to lock the door when the door is fully closed,
- a latching handle to control latching/unlatching of the door in the fuselage,
- 10 indicator flags to indicate the correct locking of the door.

The cargo compartment door hydraulic system controls the operation of the FWD and aft cargo-compartment doors. The hydraulic system of each door has a hydraulic actuator and a manual selector valve. The yellow auxiliary hydraulic system supplies the doors with hydraulic pressure. For normal operation the yellow electric pump is used. In the case of electric pump failure or no electric power on the A/C a hand pump can be used. Normal operation is done by a single operator; two operators are needed for manual operation. Turning the manual selector lever to open or close is necessary in both operating modes. Turning the manual selector lever and the normal system available will start up the electric pump and the door will move.

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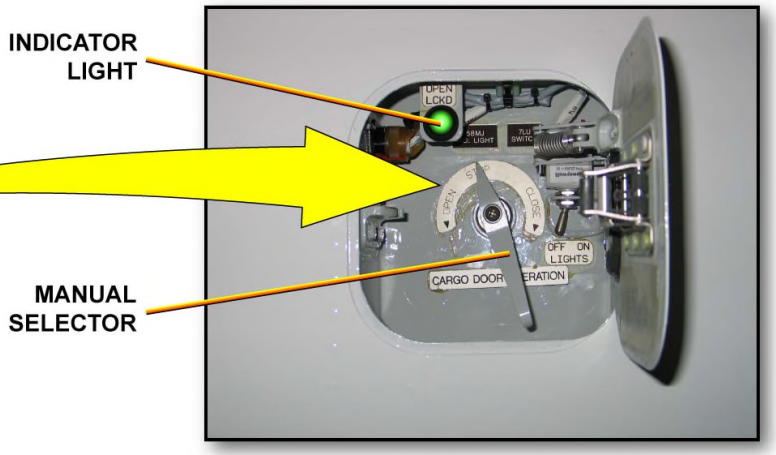
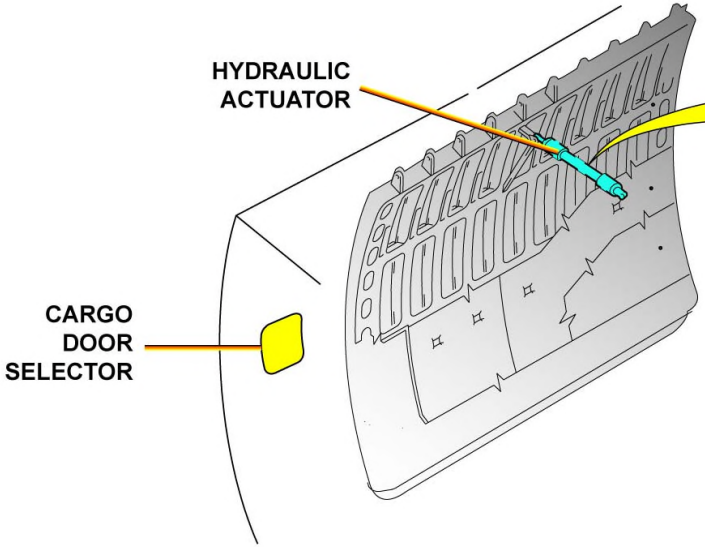
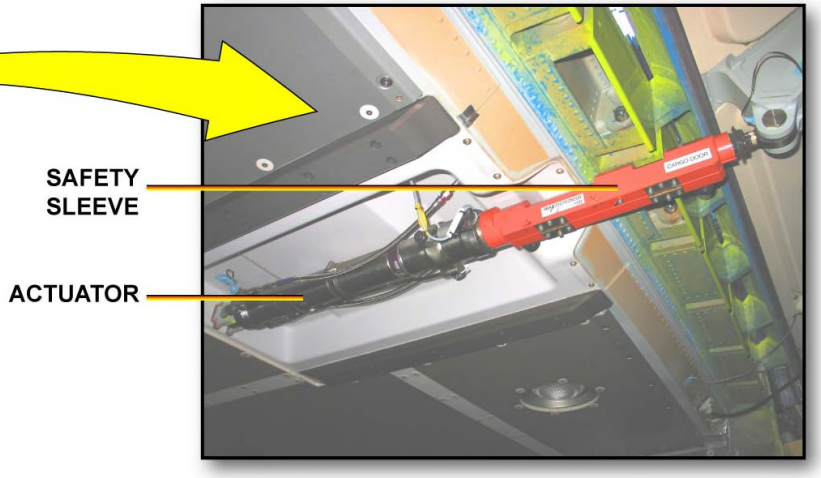
FWD CARGO DOOR

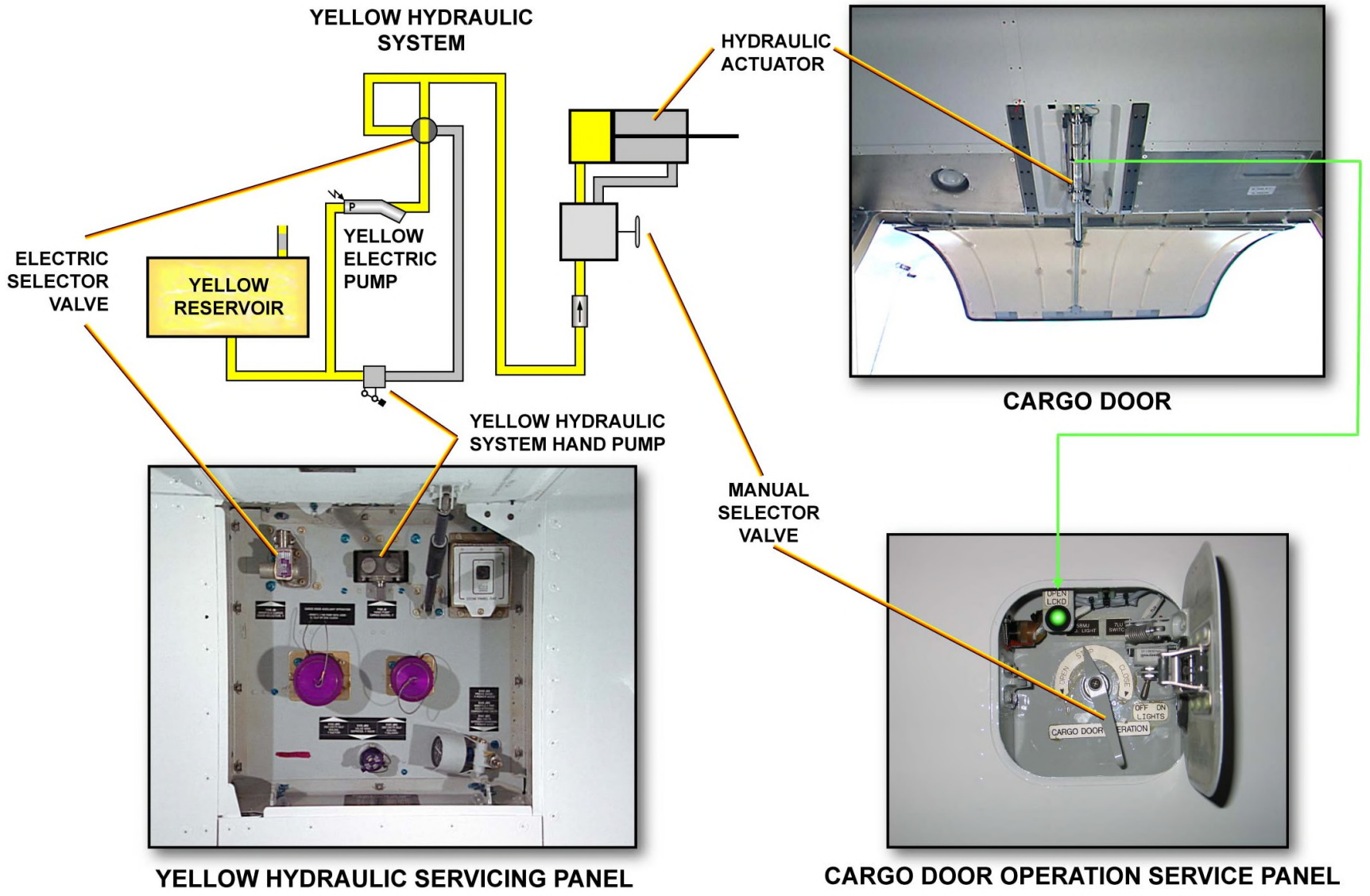


CARGO DOOR OPERATION SERVICE PANEL





SYSTEM OVERVIEW - CARGO DOORS HYDRAULIC OPERATION



SYSTEM OVERVIEW - CARGO DOORS HYDRAULIC OPERATION

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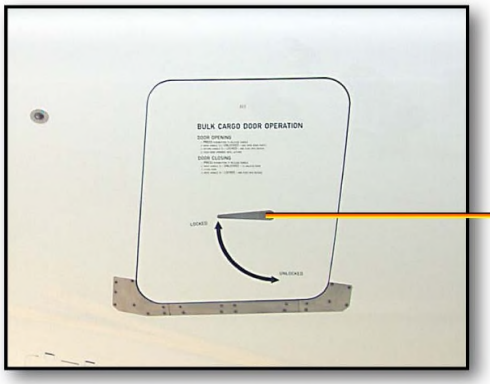
DOORS LINE MAINTENANCE BRIEFING (2)

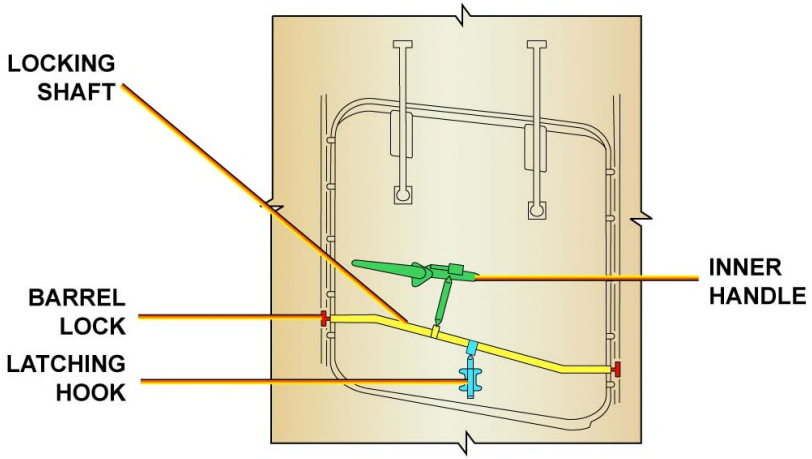
SYSTEM OVERVIEW (continued)

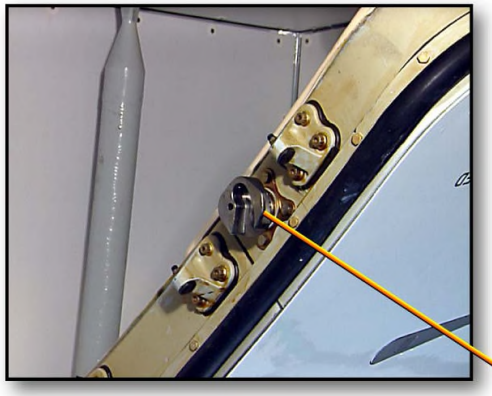
BULK CARGO DOOR LOCKING AND LATCHING

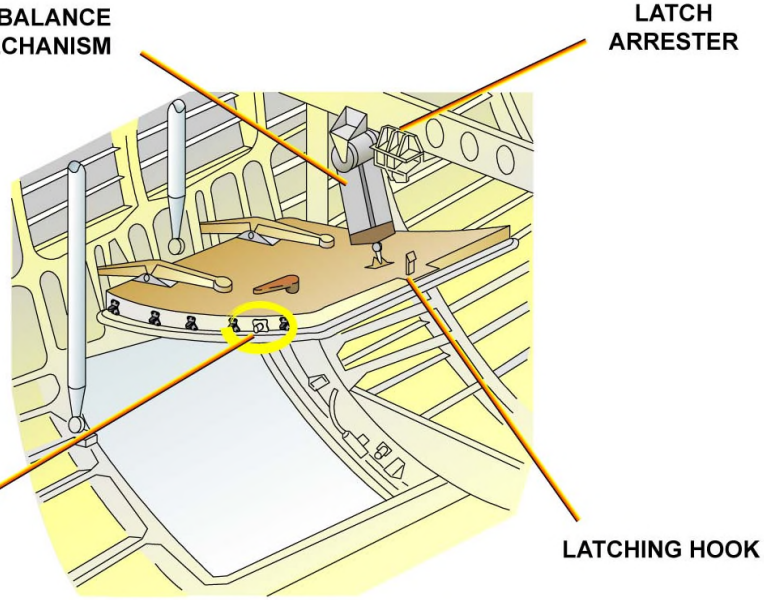
The bulk cargo door has an Inner and an outer handle, which operate the locking mechanism. There is a barrel lock installed at each end of the locking shaft to lock the door in the fuselage. A balance mechanism reduces the force, which is necessary to open the door. There is a latch assembly, which holds it in the fully open position. The locking system operates also the latching hook. To lock the latching hook in the latch arrester it is necessary to put the door control handles to the closed position.



BULK CARGO FROM THE OUTSIDE







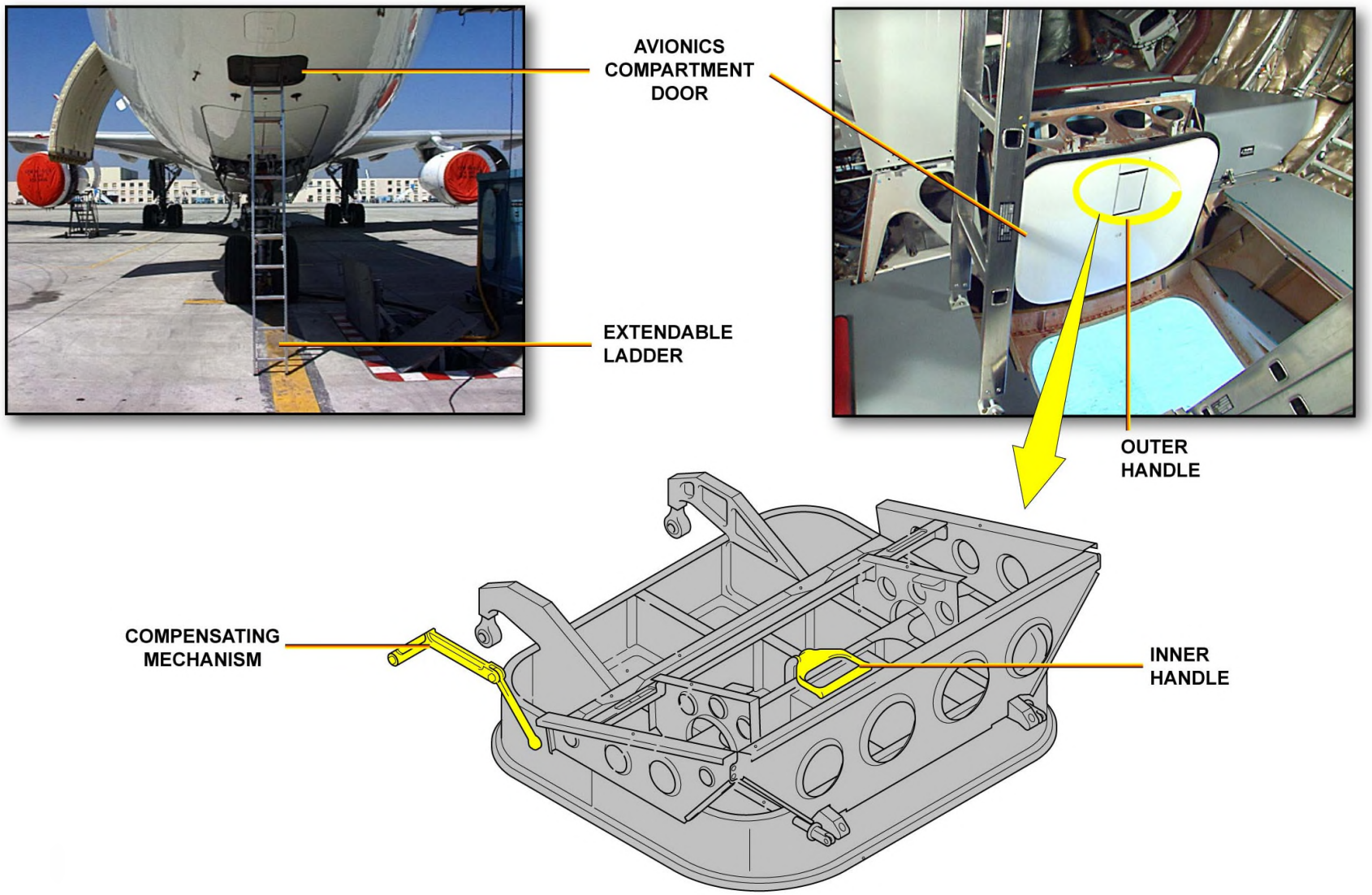
SYSTEM OVERVIEW - BULK CARGO DOOR LOCKING AND LATCHING

DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

AVIONICS COMPARTMENT DOORS BOTTOM FUSELAGE

The avionics compartment door is installed in the FWD bottom part of the fuselage in the pressured area of the aircraft. The door indicating and warning system sends a signal to the ECAM DOOR/OXY page, which indicates the state of the avionics access door. The avionics compartment door gives access to the aircraft through an extendable ladder. The door can be opened from the outside or from the inside of the fuselage with outer and inner handles. A compensating mechanism reduces the force that is necessary to operate the door.



SYSTEM OVERVIEW - AVIONICS COMPARTMENT DOORS BOTTOM FUSELAGE

DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

AVIONICS COMPARTMENT DOORS COCKPIT

The cockpit floor door gives access to the avionics compartment from the cockpit. It is located between the rear of the captain seat and the cockpit door. It can be opened from both sides and an attached ladder is used to go down into the avionics compartment.

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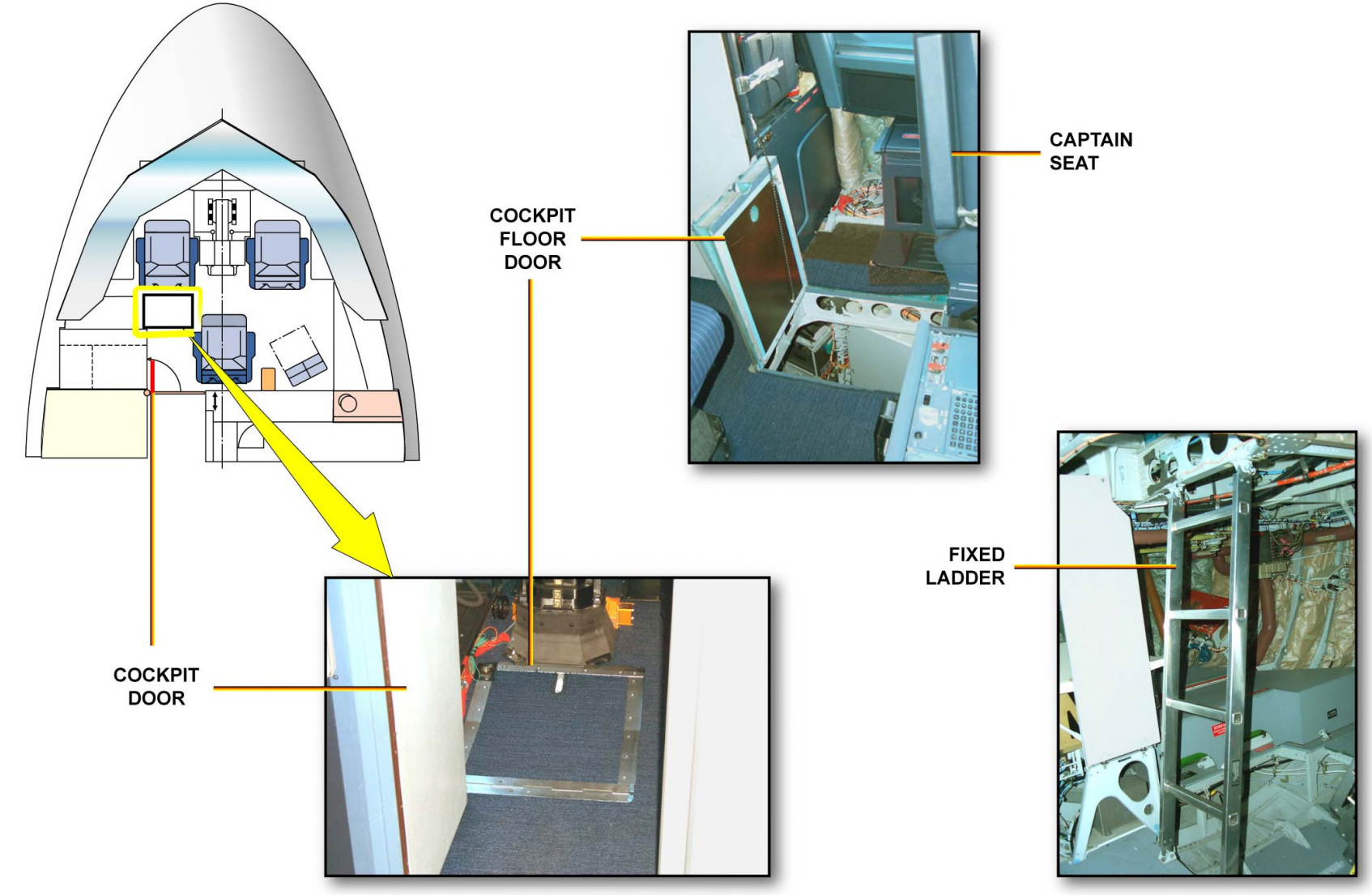

SYSTEM OVERVIEW - AVIONICS COMPARTMENT DOORS COCKPIT

DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

COCKPIT DOOR

The cockpit door separates the cockpit from the cabin. It is an armored and bulletproof door made to prevent a hijacking attempt and protect the flight compartment against an intrusion. A Cockpit Door Locking System (CDLS) controls its electrical release and prevents an unwanted access into the cockpit. The door also has a door escape hatch with a pneumatically operated decompression panel, which opens the hatch when there is a rapid decompression between the cockpit and the cabin.

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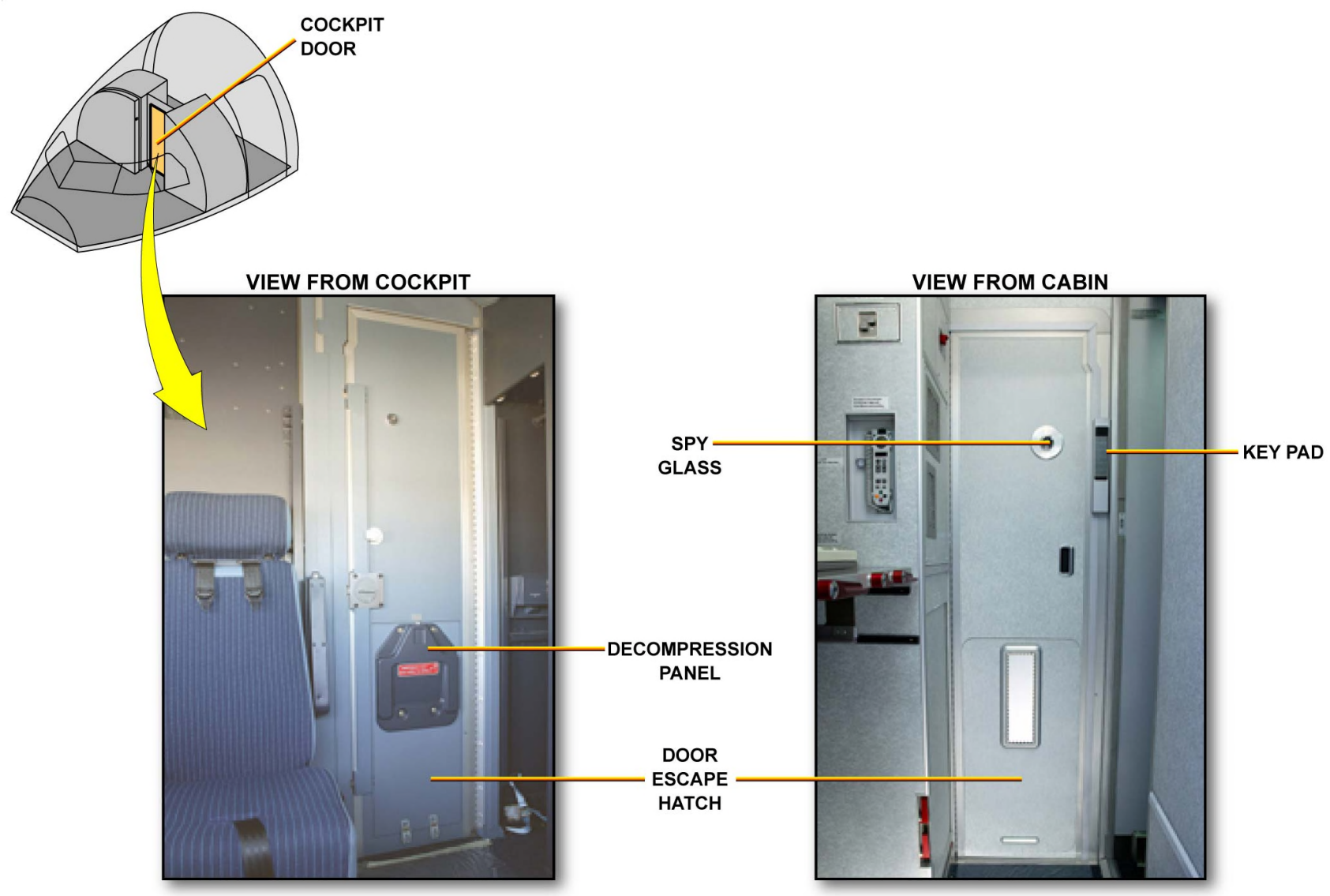

SYSTEM OVERVIEW - COCKPIT DOOR

DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

COCKPIT DOOR LOCK SYSTEM (CDLS)

The CDLS is an electrically operating system for the lock and unlock of the cockpit door.
This system is mainly composed of:
- a control unit and its CocKPiT DOOR CONTrol panel, located on the left-hand side of the overhead panel and a control unit, identical to the first one, and its CKPT DOOR CONT panel, located on the right-hand side of the overhead panel,
- the CKPT DOOR panel on the center pedestal with a toggle switch to control the cockpit door and a fault indicator,

NOTE: The CKPT DOOR panel can be equipped in option with a CAB ALERT guarded P/B, which alert CKPT crew in case of hijacking/vandalism in cabin.

- an additional CKPT DOOR BacK-UP panel, which is composed of a LocKinG SYStem SW and a OPEN/FAULT ConTroL P/B,
- the buzzer on the overhead panel,
- the keypad in the cabin for cockpit access authorization,
- three electrical release strikes,
- an additional CKPT DOOR BacK-UP panel, which is composed of a LocKinG SYStem switch and a OPEN/FAULT ConTroL P/B

NOTE: The door is always locked when closed and the aircraft is powered during maintenance activity there is a magnetic door stop to keep the door fully open.

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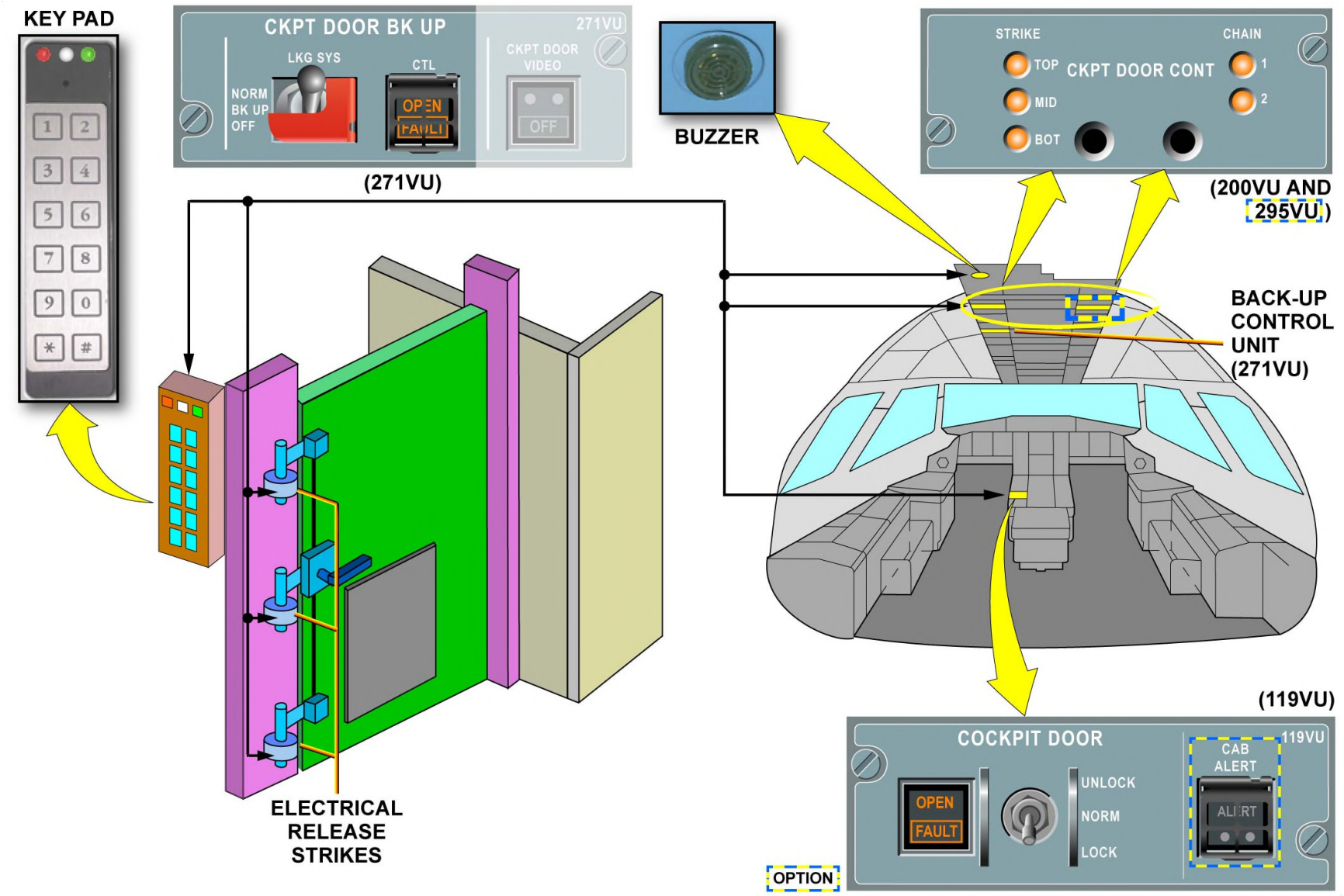

SYSTEM OVERVIEW - COCKPIT DOOR LOCK SYSTEM (CDLS)

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DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

DSCS

The Door and escape Slides Control System (DSCS) gives electrical indications related to the condition of the doors. The DSCS has:
- proximity switches,
- a compensation panel (5062VE)
- a Proximity Switch Control Unit (PSCU),
- an Autonomous Standby Power Supply Unit (ASPSU),
- a pressure switch.

The primary functions of the DSCS are to control:
- door indicating and warning,
- escape slide indicating and warning,
- the residual cabin and cargo compartment pressure detection and indicating,
- cargo doors electrical control and indicating.

On the ground, with one engine running, the DSCS prevents the pressurization of the A/C if:
- a door is not fully closed and locked,
- a sensor is defective.

If a proximity sensor fails during the flight, the aircraft will stay pressurized.

The compensation panel has one compensation sensor with a fixed target. This fixed target can be used to give a manual override function for a failed door closed proximity sensor to get the dispatch of the A/C using the Minimum Equipment List (MEL) procedure.

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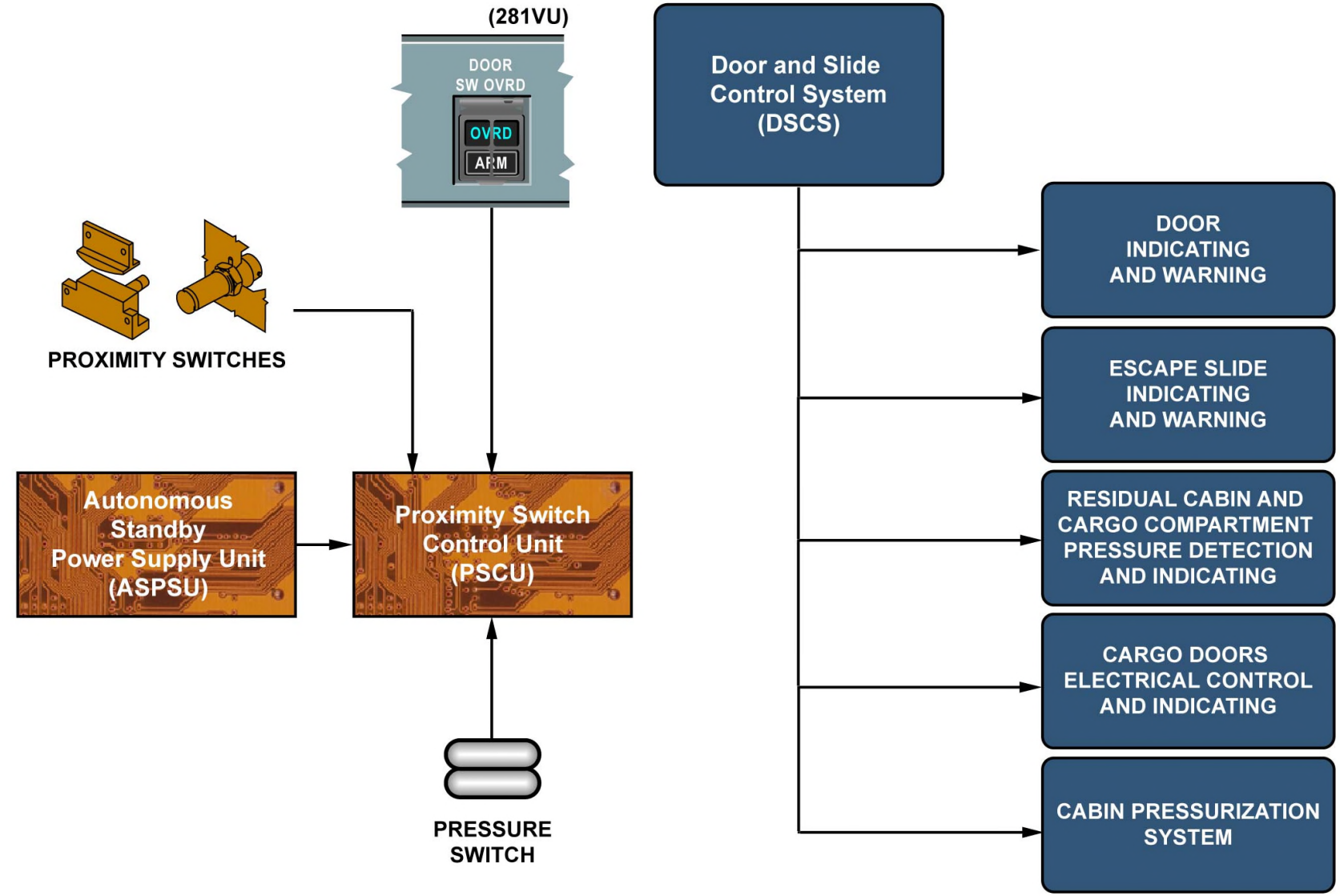

SYSTEM OVERVIEW - DSCS

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DOORS LINE MAINTENANCE BRIEFING (2)

SYSTEM OVERVIEW (continued)

MAINTENANCE/TEST FACILITIES

The DSCS can be tested via the MCDU SYSTEM REPORT/TEST pages. The PSCU has a BITE. The BITE is used for the in-flight monitoring, on ground trouble shooting and continuous self-testing. All fault data are transmitted through ARINC 429 buses to the Central Maintenance Computers (CMCs).
Their functions are to:
- find and indicate faults,
- identify defective electrical components which are Line Replaceable Units (LRU) for maintenance and trouble-shooting,
- identify defective components that are Shop Replaceable Units (SRU).

The ASPSU also has a BITE used for system test and a battery capacity test. For these tests, the ASPSU has a test panel with two P/Bs and a Light Emitting Diode (LED) display.

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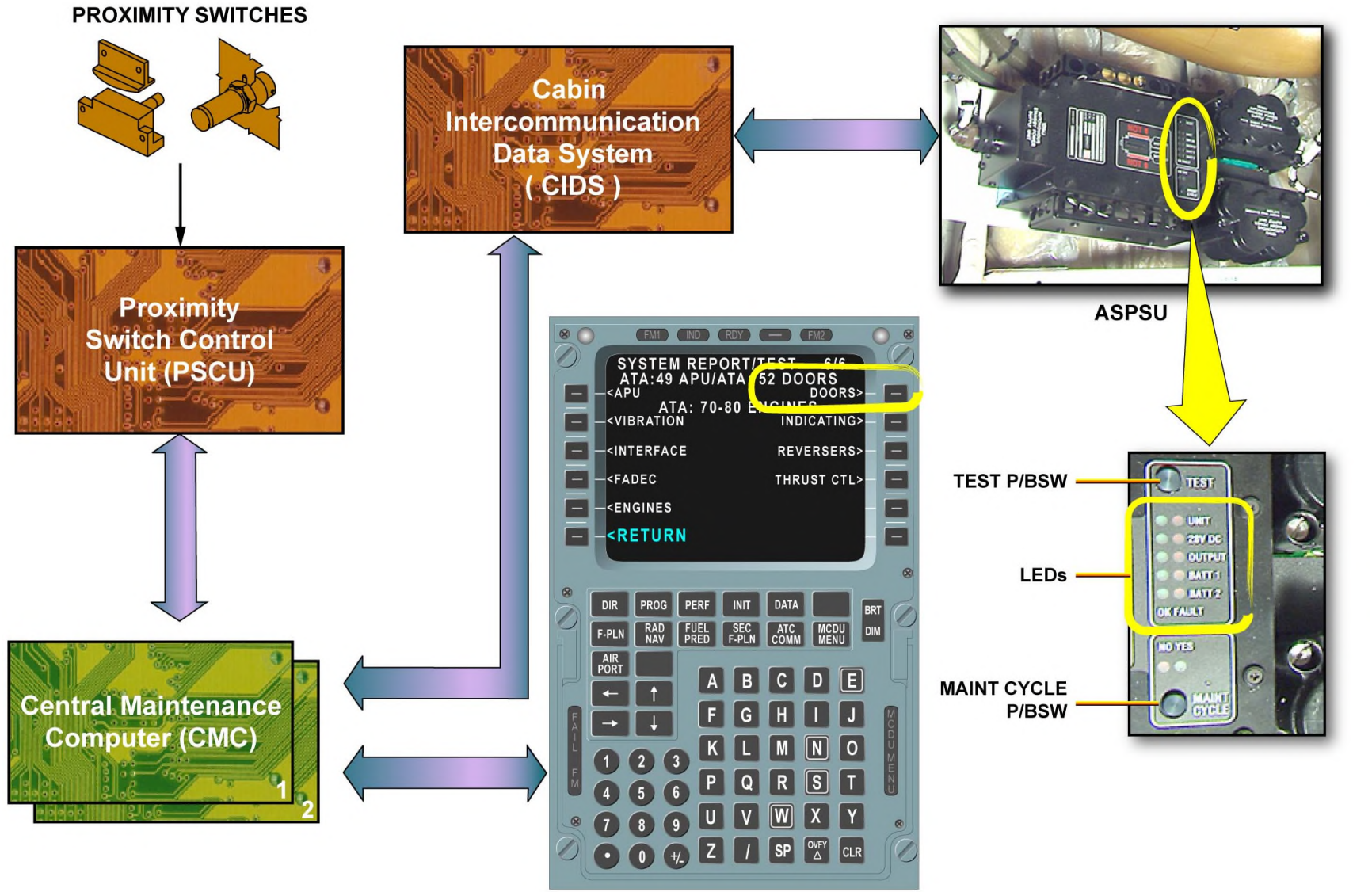

SYSTEM OVERVIEW - MAINTENANCE/TEST FACILITIES

DOORS LINE MAINTENANCE BRIEFING (2)

SERVICING

INSPECTION CHECK OF THE DAMPER AND EMERGENCY-OPERATION CYLINDER OF THE FWD, MID AND AFT PASSENGER DOORS

The AMM procedure is the same for all passenger/crew doors. Take the special precautions before you start working on the door and put in the safety pins.

Carry out a visual inspection of the door-damper and emergency-operation cylinder. Check for fluid leak, corrosion, cracks or damage on the components. Make sure these components are correctly attached.

The pressure is correct if the pointer is in the green zone. To make sure that you get an accurate reading, let the air bottle stabilize at the ambient temperature.

If the pressure is not correct, charge the cylinder bottle as necessary.

The task has been completed.

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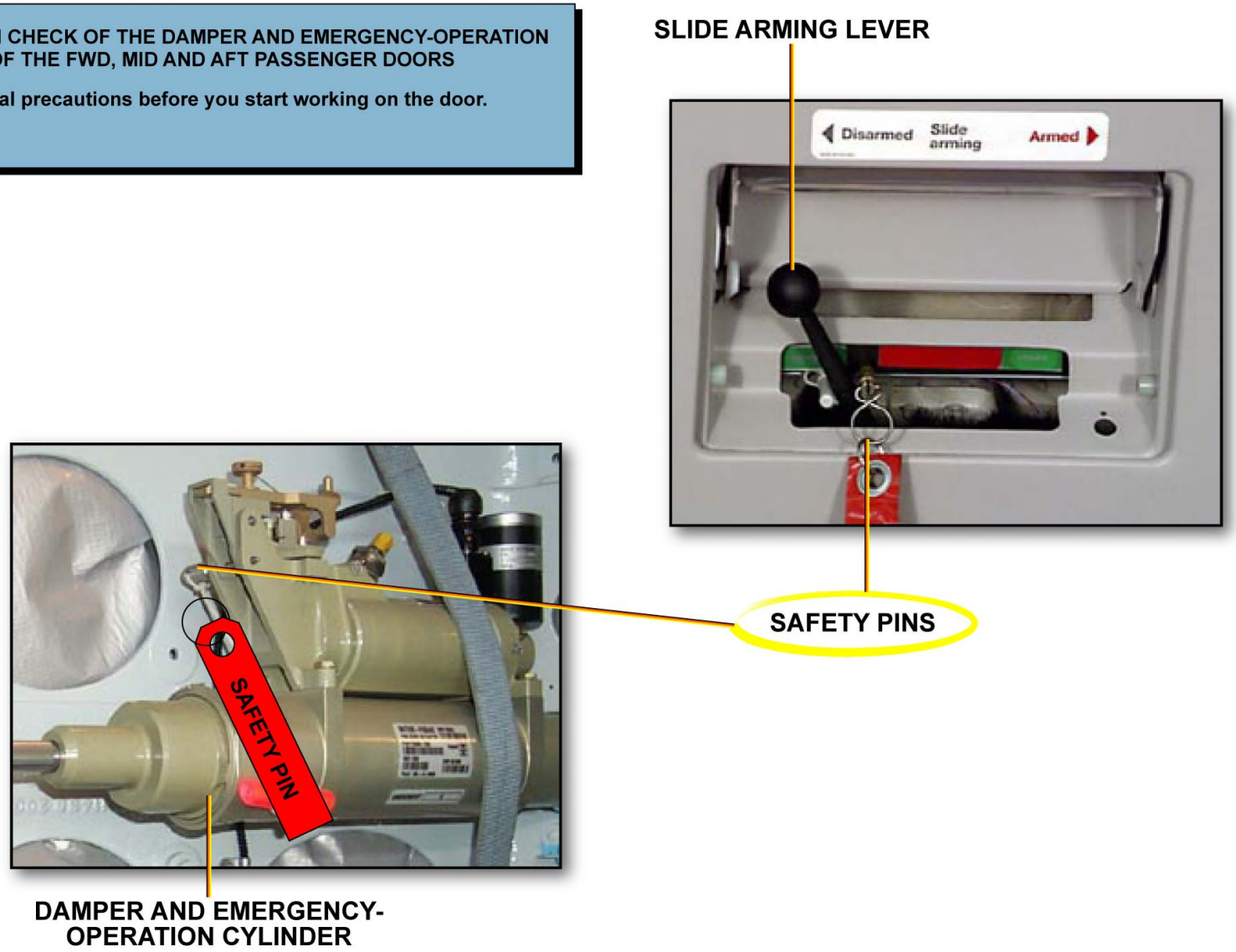
INSPECTION CHECK OF THE DAMPER AND EMERGENCY-OPERATION CYLINDER OF THE FWD, MID AND AFT PASSENGER DOORS

Do the special precautions before you start working on the door.



SERVICING - INSPECTION CHECK OF THE DAMPER AND EMERGENCY-OPERATION CYLINDER OF THE FWD, MID AND AFT PASSENGER DOORS

INSPECTION CHECK OF THE DAMPER AND EMERGENCY-OPERATION CYLINDER OF THE FWD, MID AND AFT PASSENGER DOORS

Do a visual inspection of the door-damper and emergency-operation cylinder. Make sure that there are no fluid leakage, corrosion, cracks, marks or dents and that the components are correctly attached.
Do a visual inspection of the paint. Make sure that the paint is not flaked or peeled.

DAMPER AND EMERGENCY-OPERATION CYLINDER

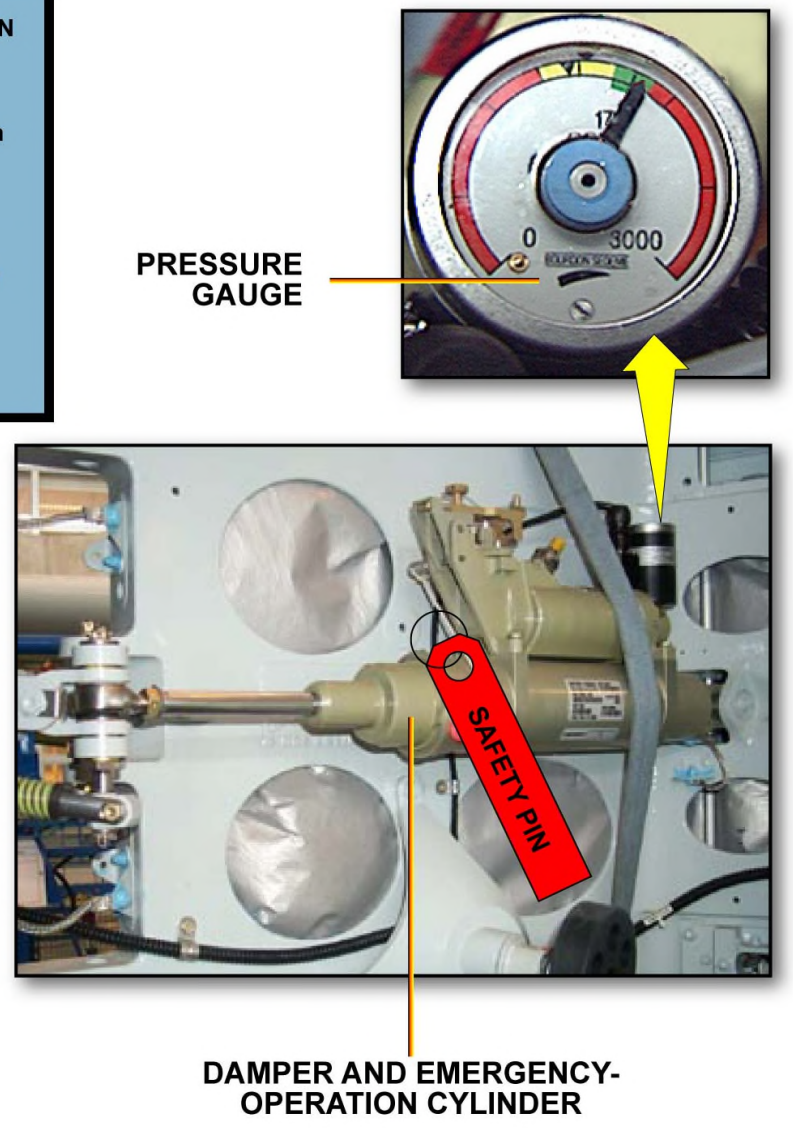
INSPECTION CHECK OF THE DAMPER AND EMERGENCY-OPERATION CYLINDER OF THE FWD, MID AND AFT PASSENGER DOORS

Check of the Pressure.

- **Make sure that the pointer in the pressure gauge is in the green zone.**

NOTE: Let the air bottle stabilizes at the ambient temperature before you do the inspection. This is to get the correct pressure value.

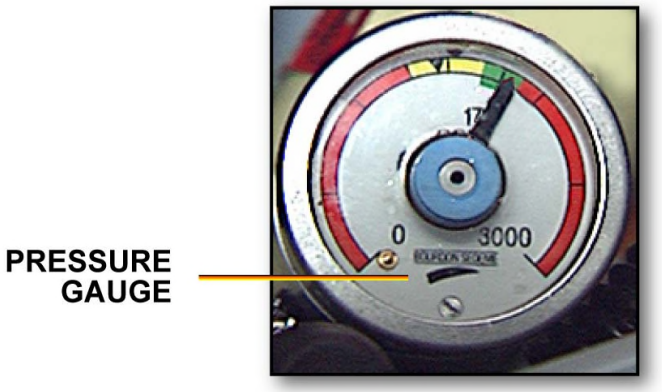
NOTE: Bubbles in the pressure gauge with a maximum diameter equal to the dial itself are acceptable.
If the oil level in the pressure gauge is not sufficient to have the pointer in the liquid (with the dial horizontal), you must discard the pressure gage.

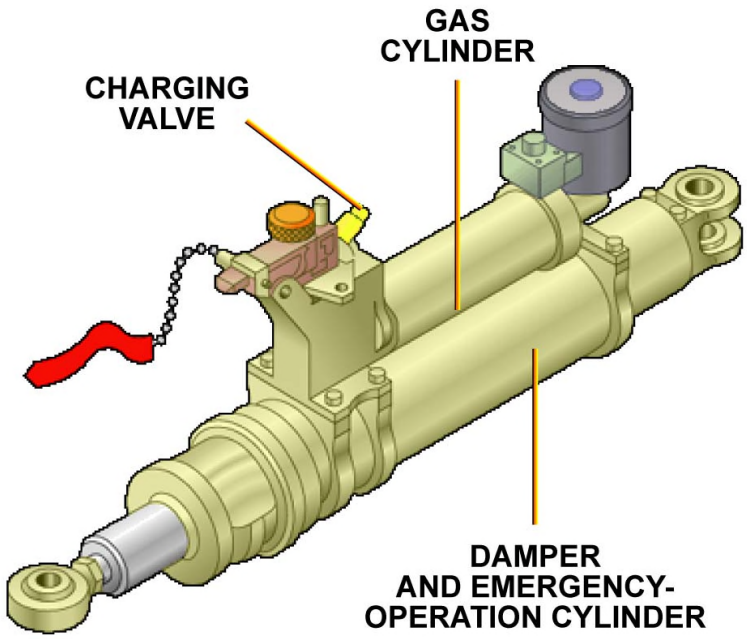


SERVICING - INSPECTION CHECK OF THE DAMPER AND EMERGENCY-OPERATION CYLINDER OF THE FWD, MID AND AFT PASSENGER DOORS

INSPECTION CHECK OF THE DAMPER AND EMERGENCY-OPERATION CYLINDER OF THE FWD, MID AND AFT PASSENGER DOORS

If the pressure is not correct, charge the cylinder bottle.





SERVICING - INSPECTION CHECK OF THE DAMPER AND EMERGENCY-OPERATION CYLINDER OF THE FWD, MID AND AFT PASSENGER DOORS

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DOORS LINE MAINTENANCE BRIEFING (2)

SERVICING (continued)

DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

The AMM procedure is similar for all passenger/crew doors. Make sure that the C/Bs 2MJ and 3MJ are opened, safetied and tagged.
To discharge the gas cylinder, remove the blanking cap from the filling valve. Slowly loosen the filling valve nut to release the pressure as required
. Then tighten the filling valve nut to the specified torque value when the pressure gauge shows the correct pressure. At the end, re-install the blanking cap on the filling valve.

NOTE: When the pressure drops to zero, then you can tighten the filling valve nut with your hand.

To charge the gas cylinder, connect a filling system (dry air or nitrogen) with a pressure gauge to the filling valve.
Fill the cylinder with the correct pressure as follows: Slowly open the control valve of the filling system and close it when the pressure gauge shows 55 bars (797.7073 psi).
After three seconds open the control valve again and close it when the pressure gauge shows 83 bars (1203.8129 psi).
Three seconds later open the control valve again and close it when the pressure gauge shows 123 bars (1783.9637 psi) for the A340 and 120 bars (1740.4524 psi) for the A330.

NOTE: The cylinder is correctly pressurized when the pointer of the pressure gauge is in the green area.

Tighten the filling valve nut with your hand. Remove the extension adapter from the filling valve when the pressure is stable. Tighten the filling valve nut to the specified torque value and install the blanking cap. The task has been completed.

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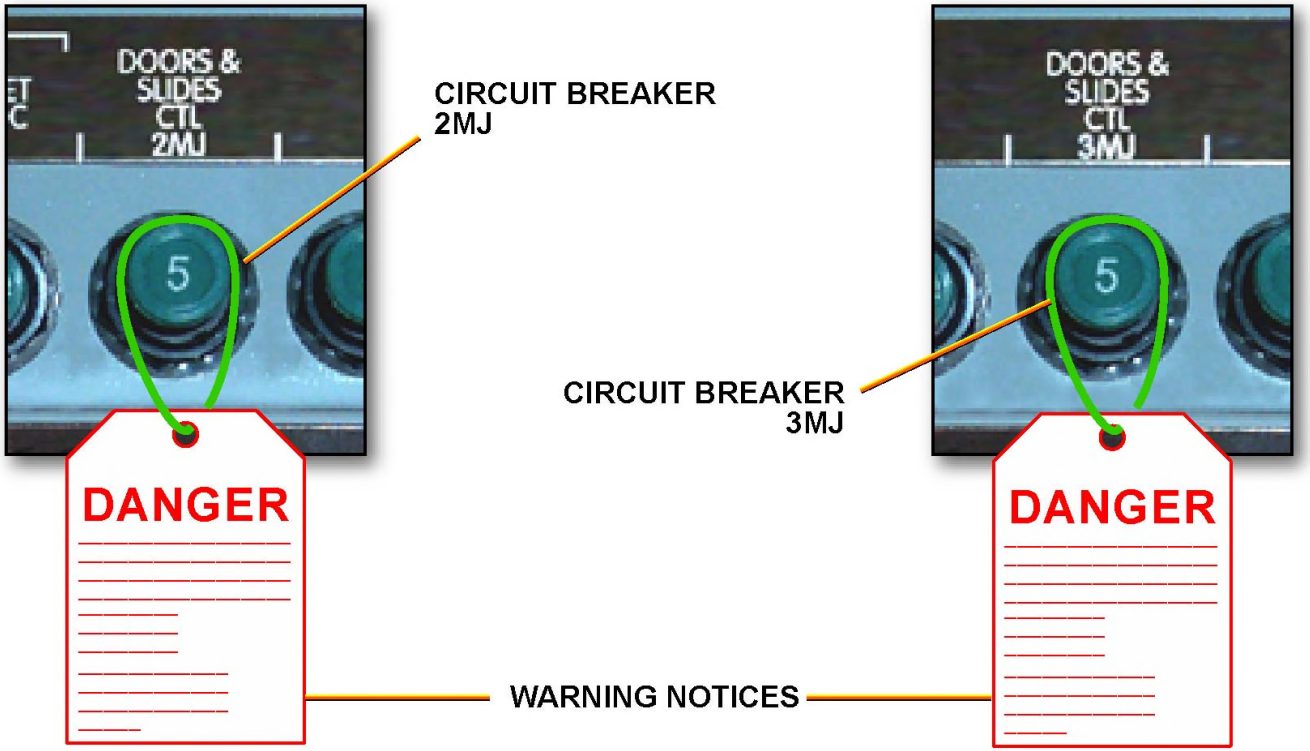
DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Open,safety and tag these circuit breakers:

721VU	DOORS &SLIDES CTL	3MJ	N12 (for A340)
721VU	DOORS &SLIDES CTL	3MJ	N12 (for A330)
722VU	DOORS &SLIDES CTL	2MJ	P41

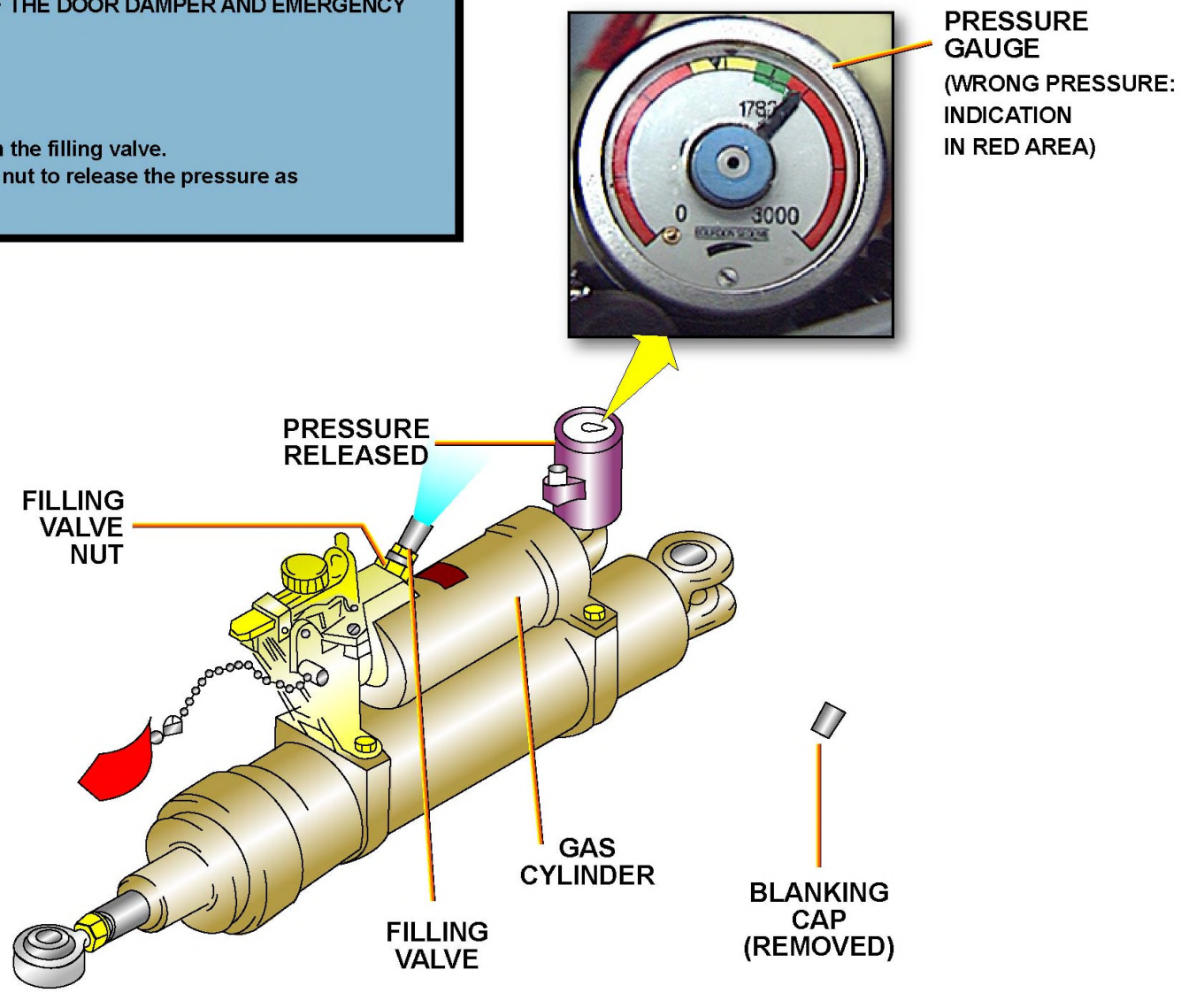


SERVICING - DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Discharging of the Cylinder

Remove the blanking cap from the filling valve.
Slowly loosen the filling valve nut to release the pressure as required.



SERVICING - DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

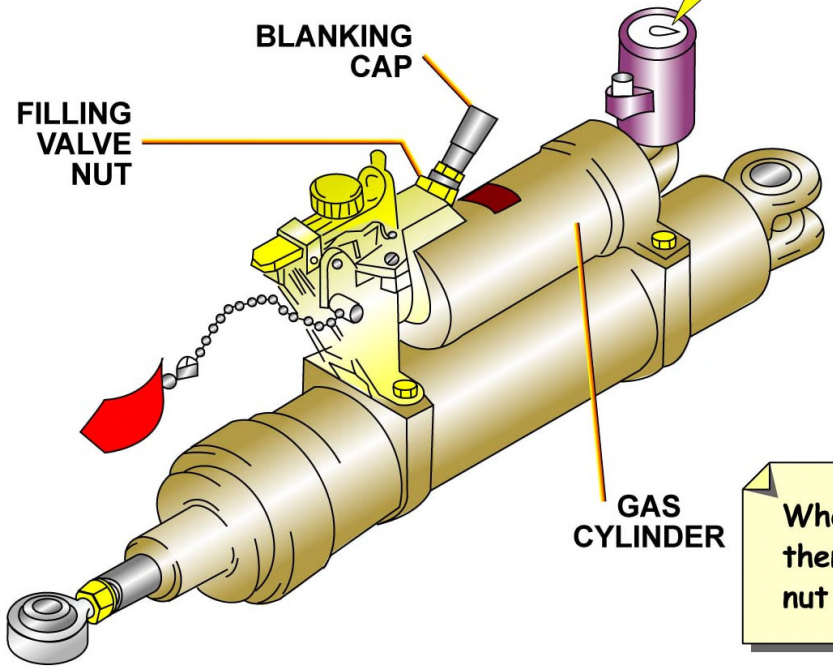
G7508471 - G3NT1T0 - FM52B1000000001

DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Discharging of the Cylinder

Tighten the filling valve nut to the specified torque value when the pressure gage shows the correct pressure.
NOTE: When the pressure is decreased to zero, then you can tighten the filling valve nut with your hand.
Install the blanking cap on the filling valve.

PRESSURE GAUGE
(CORRECT PRESSURE: INDICATION IN GREEN AREA)



When the pressure drops to zero, then you can tighten the filling valve nut with your hand.

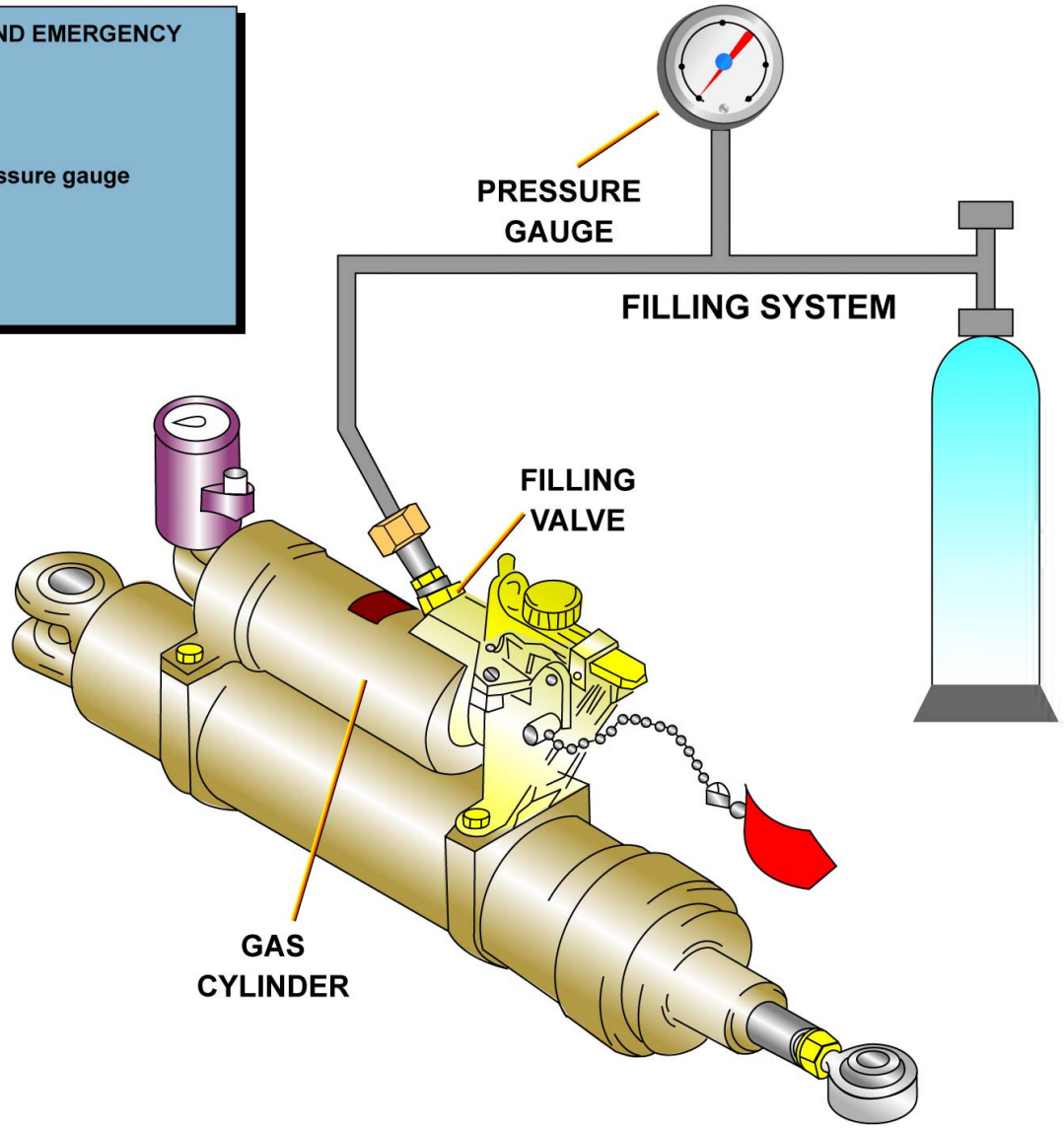
SERVICING - DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

G7508471 - G3NT1T0 - FM52B1000000001

DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Charging of the Cylinder

Connect a filling system (Dry air or Nitrogen) with a pressure gauge to the filling valve.



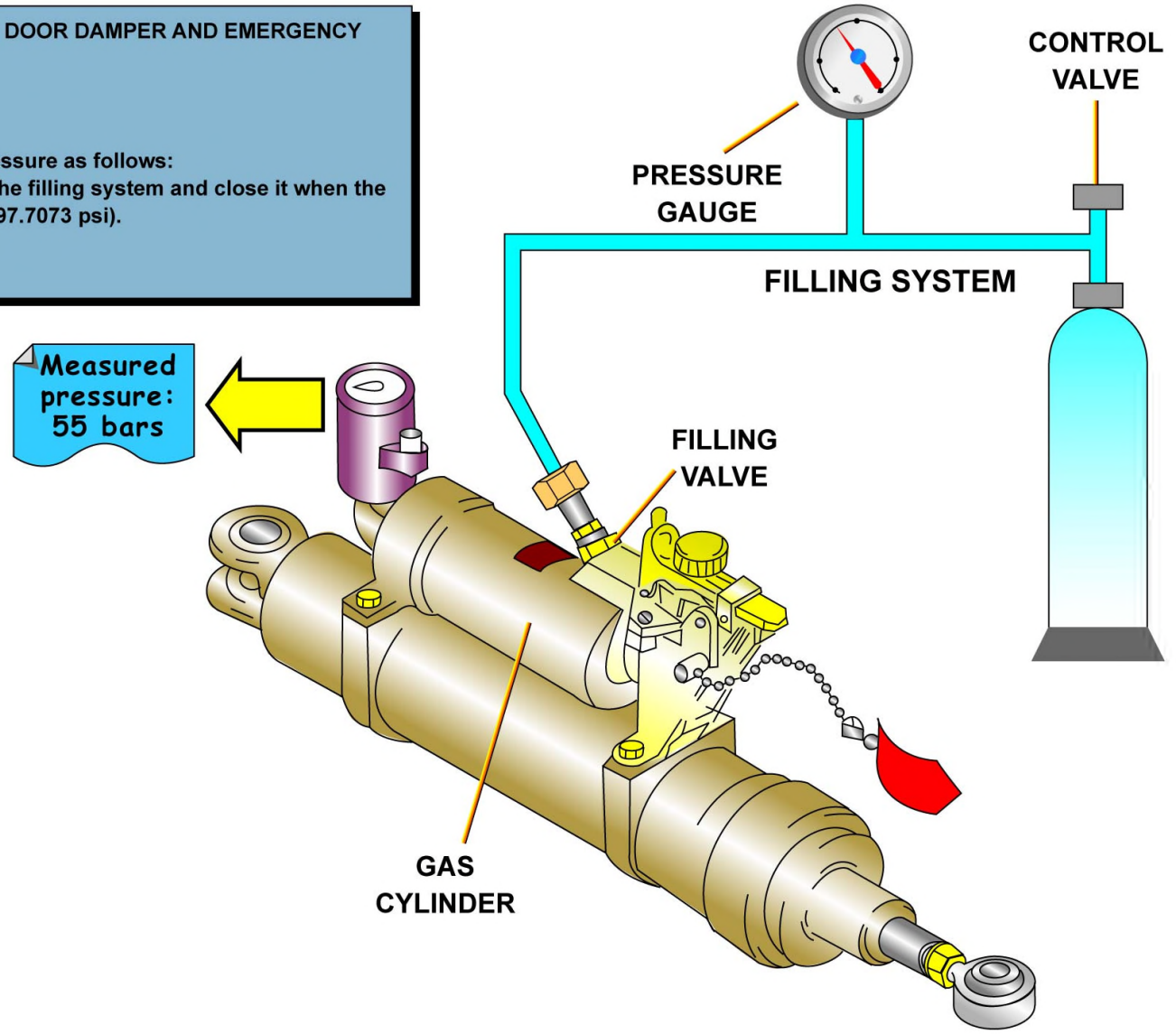
SERVICING - DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Charging of the Cylinder

Fill the cylinder with the correct pressure as follows:

Slowly open the control valve of the filling system and close it when the pressure gauge shows 55 bars (797.7073 psi).

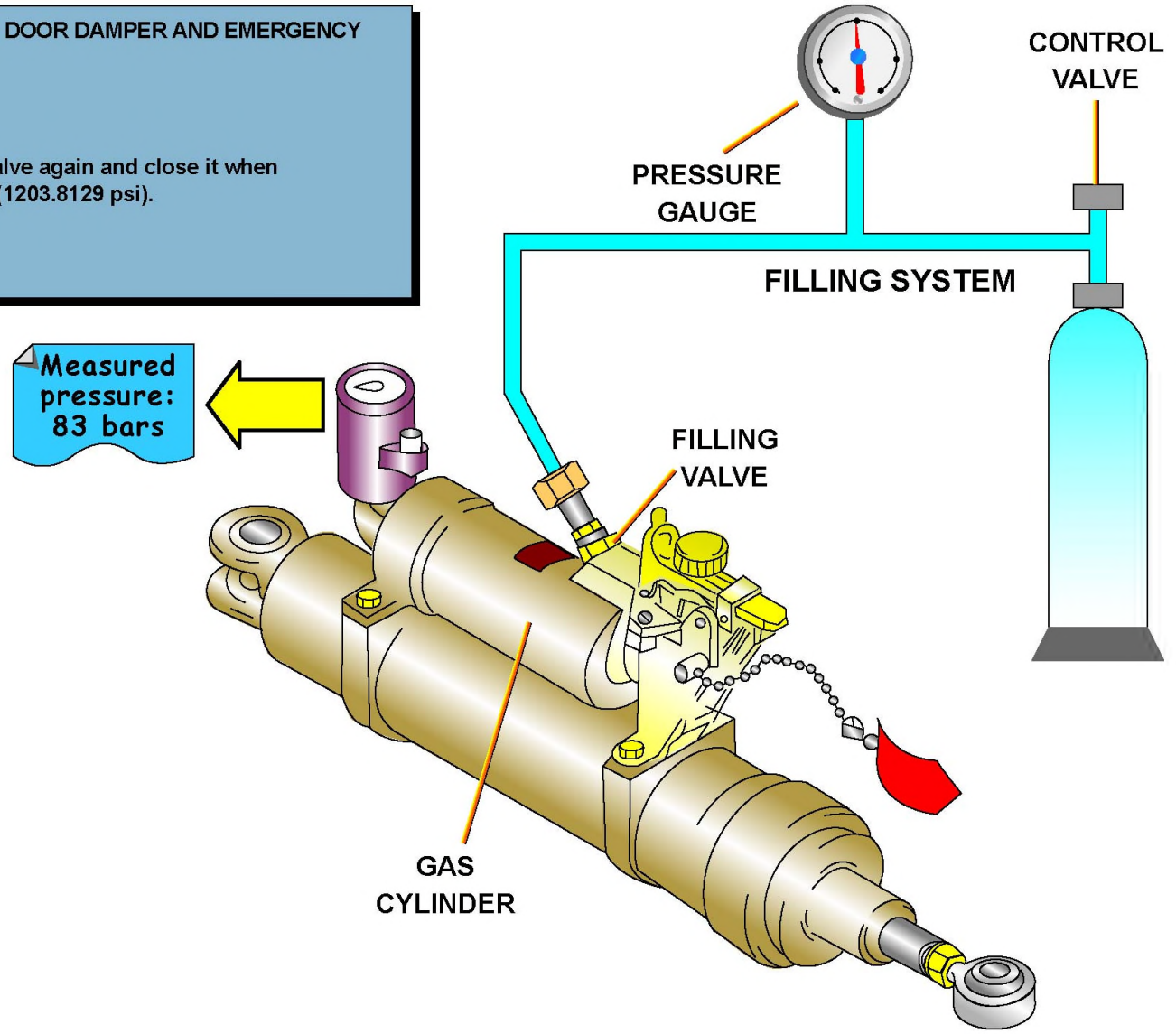


SERVICING - DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Charging of the Cylinder

After 3 seconds open the control valve again and close it when the pressure gauge shows 83 bars (1203.8129 psi).

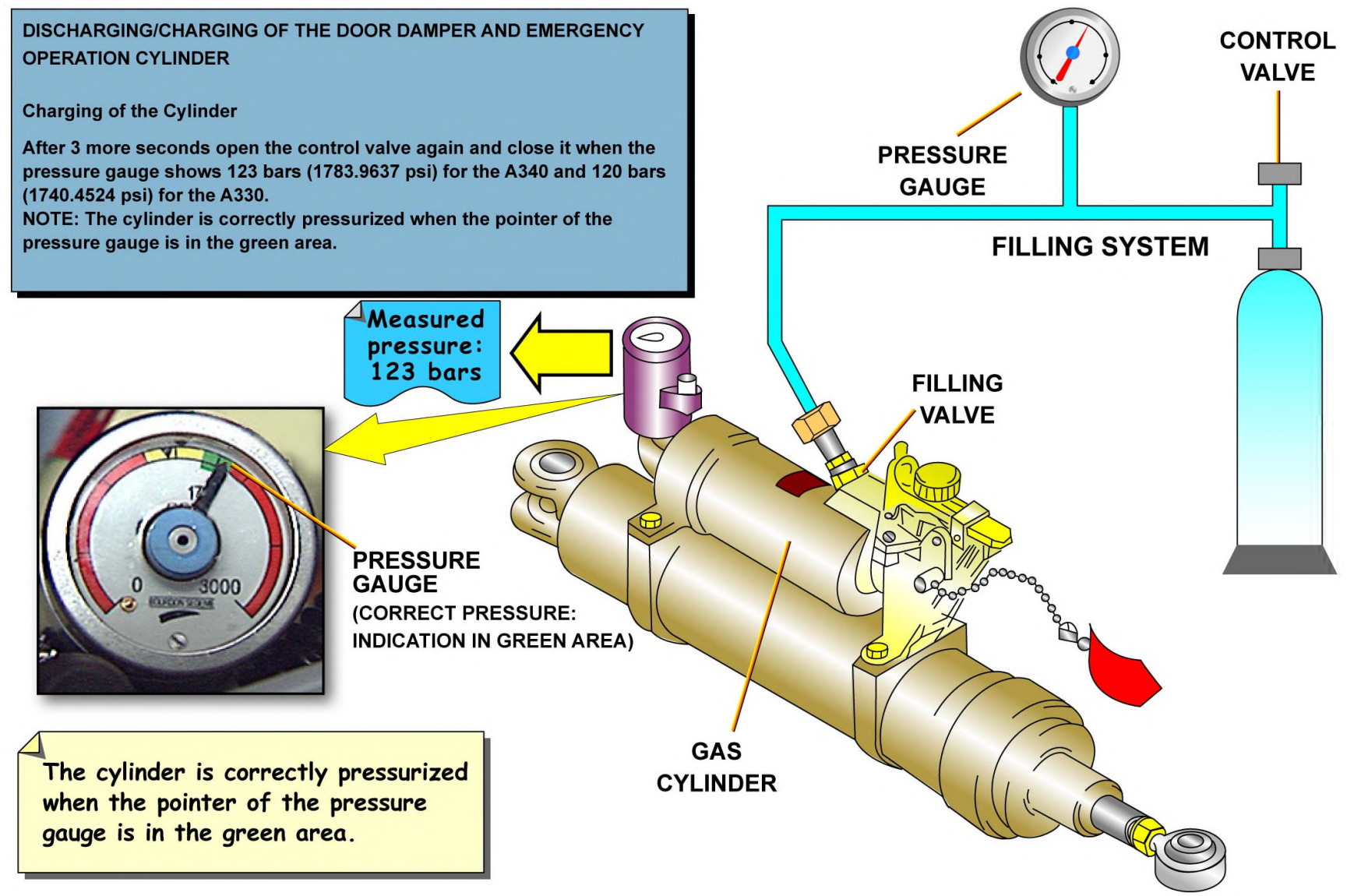


SERVICING - DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Charging of the Cylinder

After 3 more seconds open the control valve again and close it when the pressure gauge shows 123 bars (1783.9637 psi) for the A340 and 120 bars (1740.4524 psi) for the A330.
NOTE: The cylinder is correctly pressurized when the pointer of the pressure gauge is in the green area.

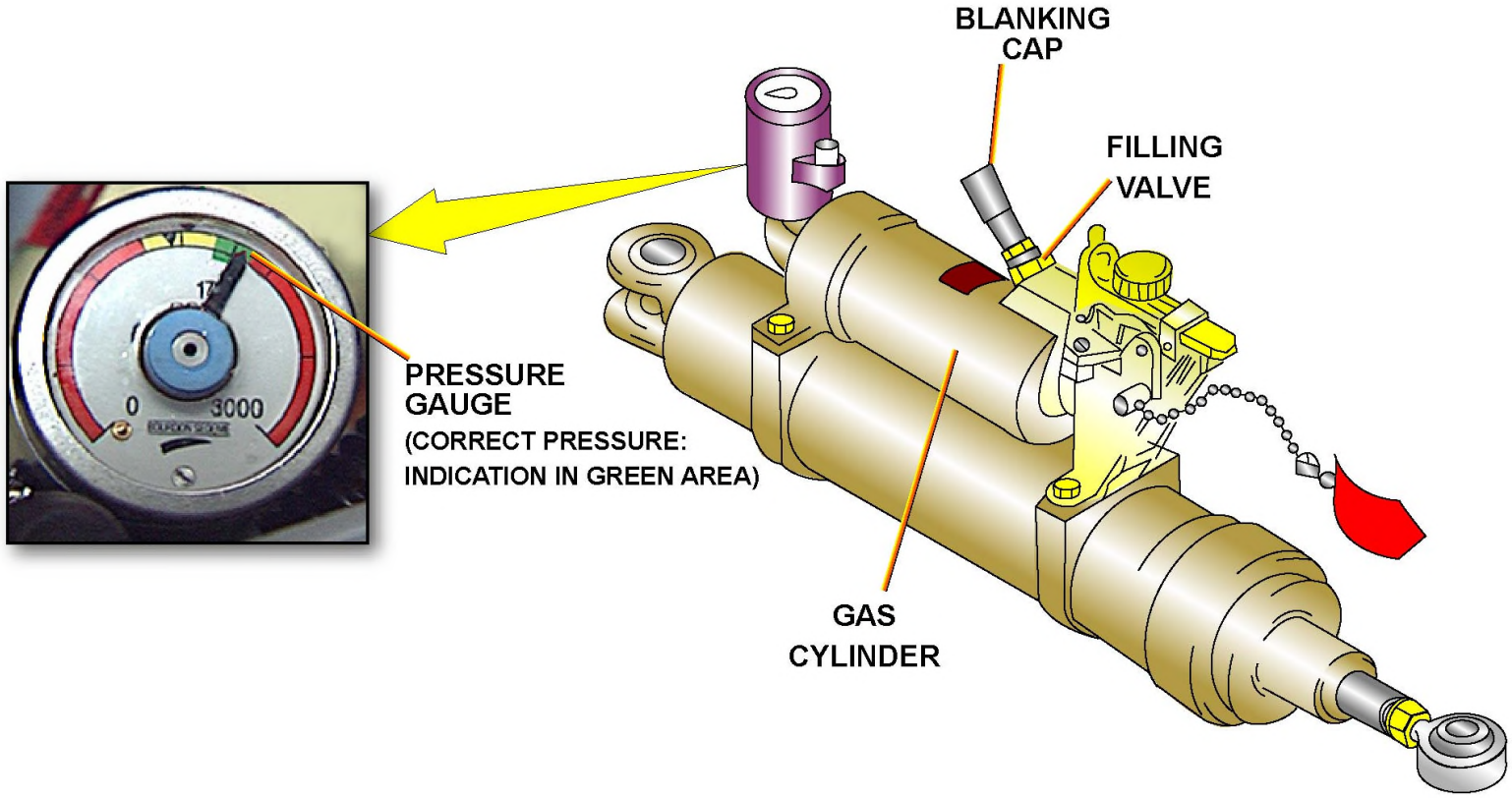


SERVICING - DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

G7508471 - G3NT1T0 - FM52B1000000001

DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Remove the extension adapter from the filling valve when the pressure is stable. Tighten the filling valve nut to the specified torque value.



SERVICING - DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

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G7508471 - G3NT1T0 - FM52B1000000001

DOORS LINE MAINTENANCE BRIEFING (2)

MAINTENANCE TIPS

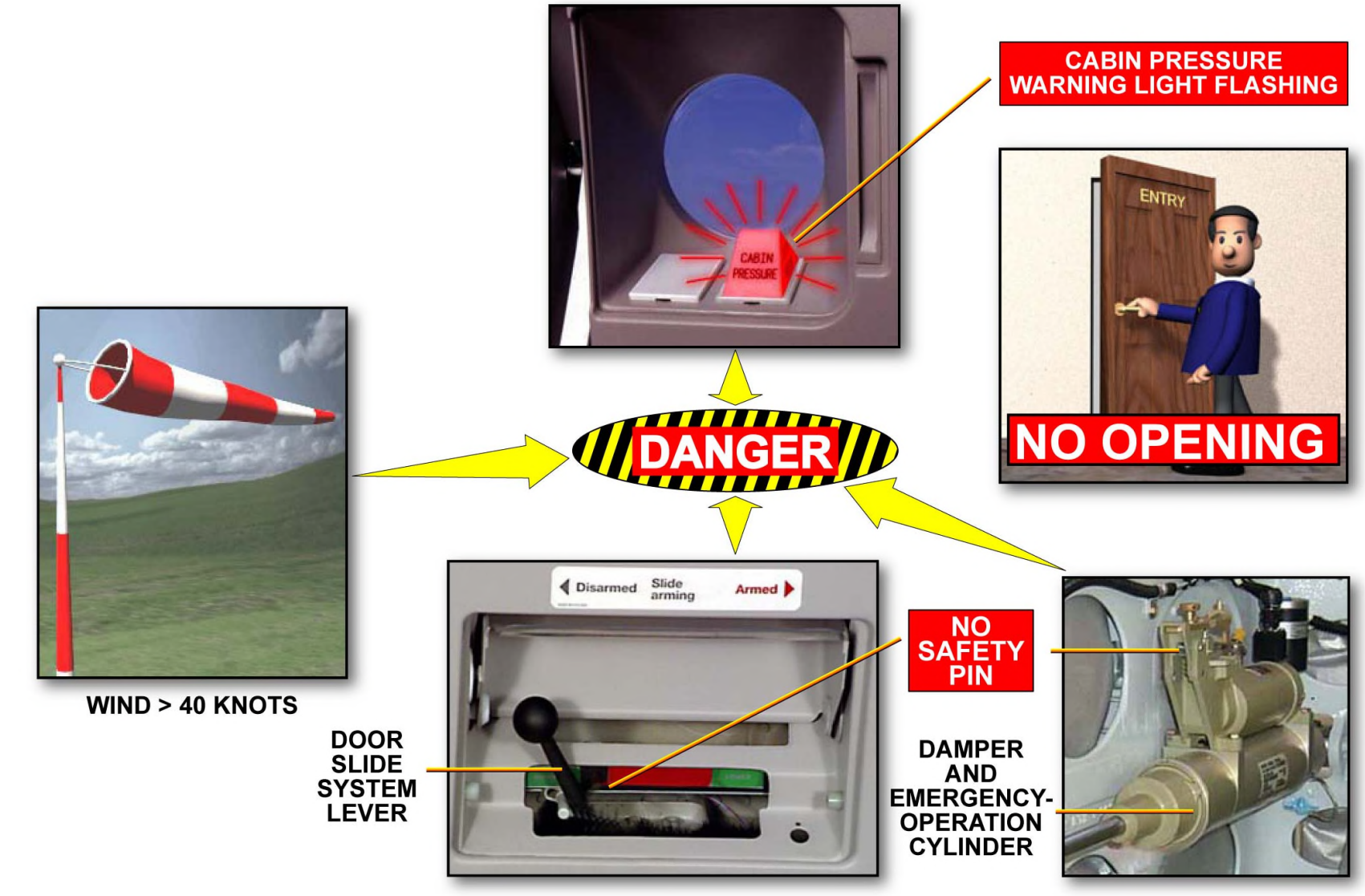
DOORS SAFETY

WARNING: DO NOT OPEN THE PASSENGER/CREW DOORS WHILE THE RED WARNING LIGHT FLASHES. IF THE RED WARNING LIGHT FLASHES, REMAINING PRESSURE COULD CAUSE DOOR TO OPEN SUDDENLY AND COULD KILL OR CAUSE SERIOUS INJURY TO PERSONS, AND CAUSE DAMAGE TO THE A/C.

CAUTION: DO NOT OPEN THE DOOR IF THE WIND SPEED IS MORE THAN 40 KNOTS TO PREVENT DAMAGE TO THE DOOR OR TO THE A/C STRUCTURE. IF THE A/C IS PUT INTO THE WIND THE MAXIMUM WIND SPEED CAN BE 50 KNOTS.

WARNING: MAKE SURE THE DOOR SLIDE SYSTEM LEVER IS IN THE DISARMED POSITION, AND THE SAFETY PIN IS INSTALLED.

After door opening, make sure the percussion lever of the door-damper cylinder is in the disarmed position with the safety pin installed to make sure that the door does not open suddenly. If the door opens suddenly it can cause injury and/or damage.



MAINTENANCE TIPS - DOORS SAFETY

DOORS LINE MAINTENANCE BRIEFING (2)

MEL/DEACTIVATION

CDLS WITH NO BACK UP SYSTEM INSTALLED

The CDLS may be inoperative provided the complete system is deactivated in the unlocked position and is not required by operational regulations for the intended flight.

CDLS WITH BACK UP SYSTEM INSTALLED

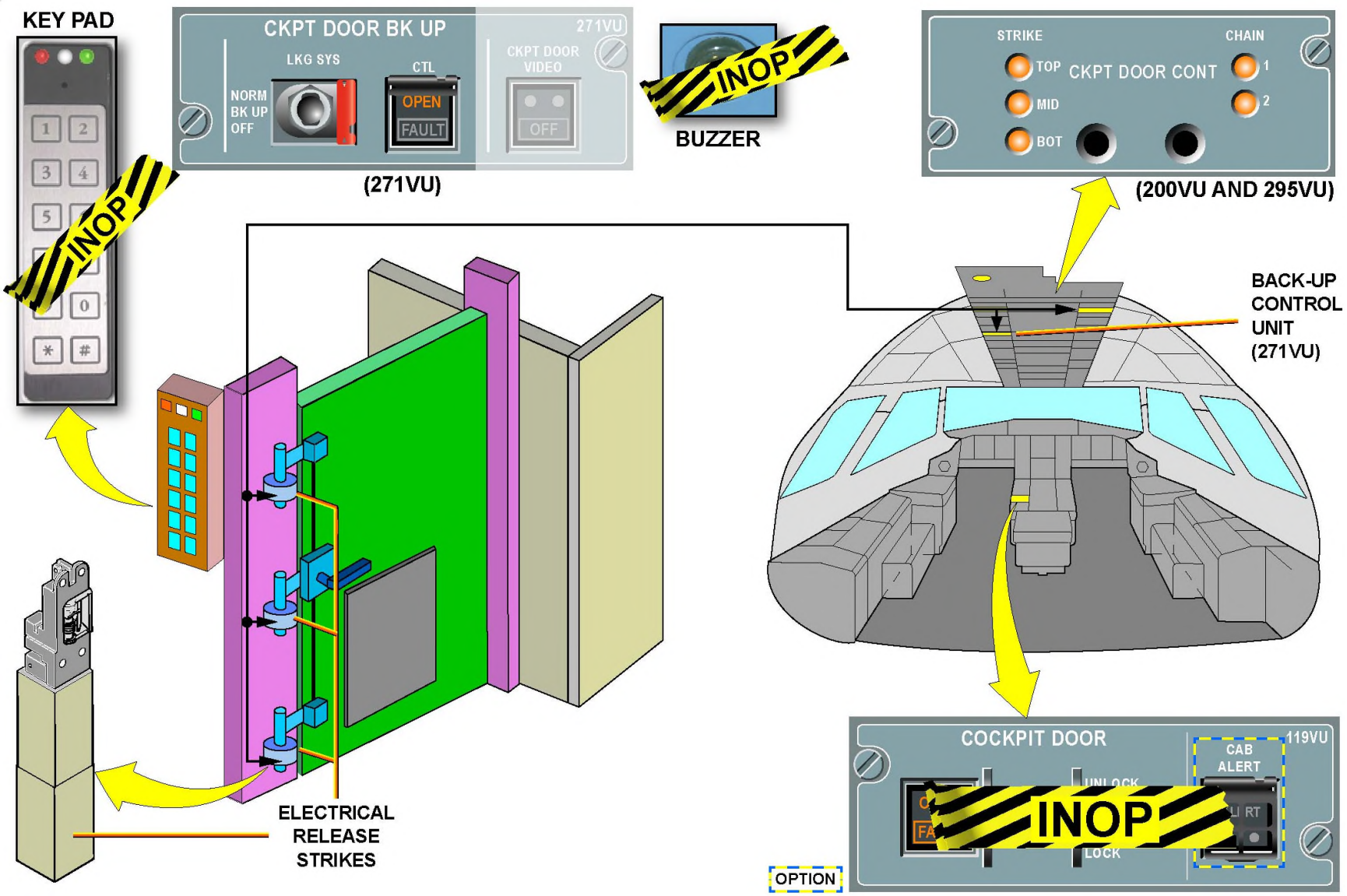
The CDLS normal system (normal control unit, toggle SW and lights on CKPT DOOR CONT Panel, buzzer, keypad, door release strikes) may be inoperative if:
- the interphone system between the cabin and the CKPT is operative,
- the LKG SYS selector is set to the BK UP position on CKPT DOOR BK UP panel,
- the back-up control unit is operative.

In backup mode:
- the cabin crew has to use the interphone to make any cockpit access request,
- the flight crew has to use the OPEN/FAULT CTL P/B located on the CKPT DOOR BK UP overhead panel, to unlock the door when access to the cockpit is authorized.

No emergency access from the cabin to the cockpit is available.

NOTE: This procedure does not apply when door release strikes are inoperative.

G7508471 - G3NT1T0 - FM52B1000000001



MEL/DEACTIVATION - CDLS WITH NO BACK UP SYSTEM INSTALLED & CDLS WITH BACK UP SYSTEM INSTALLED

G7508471 - G3NT1T0 - FM52B1000000001

DOORS LINE MAINTENANCE BRIEFING (2)

MEL/DEACTIVATION (continued)

DOOR WARNING

One or more indications on the ECAM DOOR/OXY page may be inoperative if a visual check is made to confirm that doors are closed and locked.

NOTE: If the PSCU or at least one proximity switch is the cause of a door caution, pressurization will be prevented at engines start.

The PSCU may be inoperative if:
- a visual check is made to confirm that the doors are closed and locked,
- the flight is not pressurized.

One proximity sensor is installed on:
passenger doors N °1, 2 and 4,
cabin emergency passenger doors N °3

The FWD, aft and bulk cargo doors may be inoperative for a period of time, which does not exceed three consecutive calendar days, and the A/C can be pressurized if:
- the related door locking mechanisms are checked to be functional,
- the door override procedure is applied,
- a visual check is made to confirm that the related door is closed and locked.

NOTE: If the affected door is re-opened, the complete maintenance procedure will need to be done again.
When more than one proximity switch is inoperative, the PSCU is as inoperative.

G7508471 - G3NT1T0 - FM52B1000000001

DOOR OVERRIDE PROCEDURE

...

✓ **Job set-up**

...

✓ **Make sure that:**

...

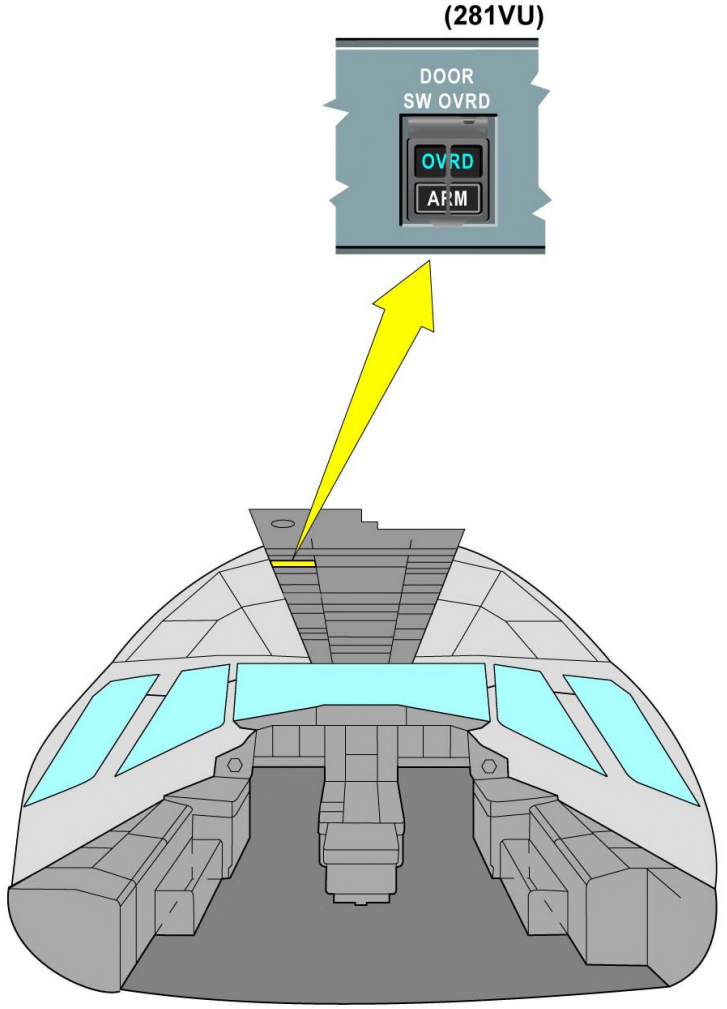
⇨ **Procedure**

...

⇨ **Door override:**

- Close, latch and lock all passenger, cabin emergency passenger and cargo doors.
- Identify on the ECAM DOOR/OXY page which door is displayed open and reopen and close again the affected door to confirm the ECAM indication.
- In the cockpit, on the overhead panel:
  DOOR SW OVRD P/BSW. . . . . ARM.
  Check that the associated light is illumninated in white.
- Open the affected door and confirm this by a visual check.
- Close, latch and fully lock the affected door and confirm this by a visual check.
- In the cockpit, on the overhead panel:
  DOOR SW OVRD P/BSW. . . . . OVRD.
- Check that the associated OVRD light is illumninated in blue (the ARM indication goes off).
- Check on the ECAM DOOR/OXY page that the affected door is displayed closed.

...



MEL/DEACTIVATION - DOOR WARNING

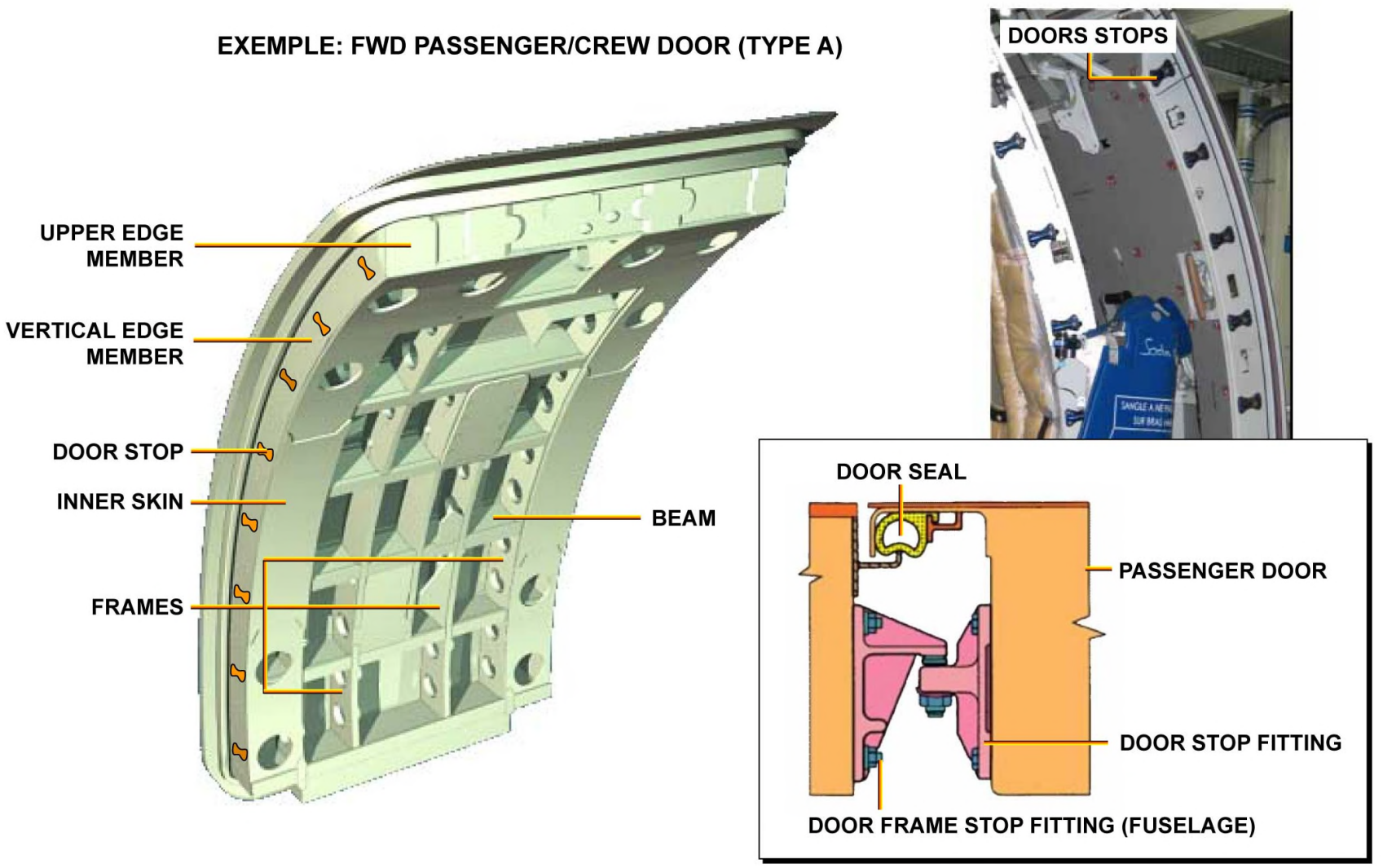
PASSENGER DOOR CONTROL MECHANISM D/O (3)

PASSENGER DOORS

The main functions of the passenger door control system are:
- handle operation,
- door lowering,
- door lifting,
- door locking,
- door stay mechanism.

Passenger doors:
The aircraft has six passenger doors (type A), located on each side of the fuselage at frames (Fr) 14/16A, Fr 33/35A and 73A/75A.
normal operation of the door is possible from the inside and the outside of the aircraft. Emergency operation is only possible from the inside. The doors are of fail-safe, plug-type construction. The door structure is of conventional design, composed of outer and inner skins, segments, beams and two lateral frames on which are fixed hinge fittings and locking mechanisms. The loads resulting from cabin pressure are transferred by eight stops located on each side of the door. Emergency exit doors:
Two additional type I passenger emergency exits, one on each side of the fuselage, are provided aft of the wing between Fr 53.5 and 53.7. The structural design and operation of these plug-type exits is similar to that of the main doors. Pax and emergency exit doors have an evacuation system in the lower part of the door (slide or slide/raft).

G7508471 - G3NT1T0 - FM52D1F52A70102



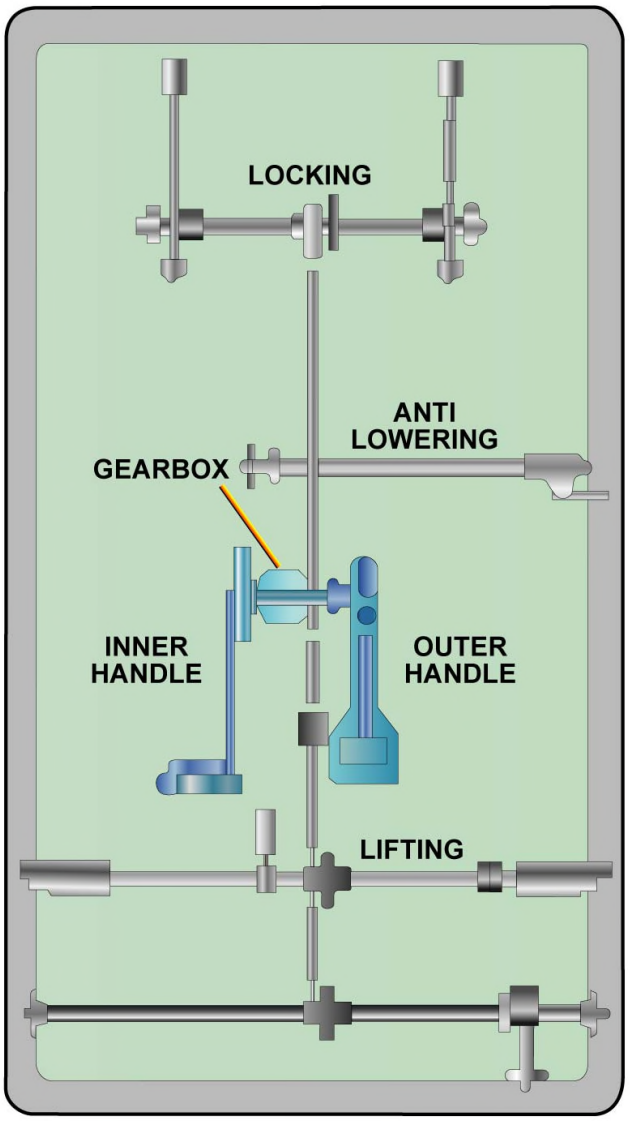
PASSENGER DOORS

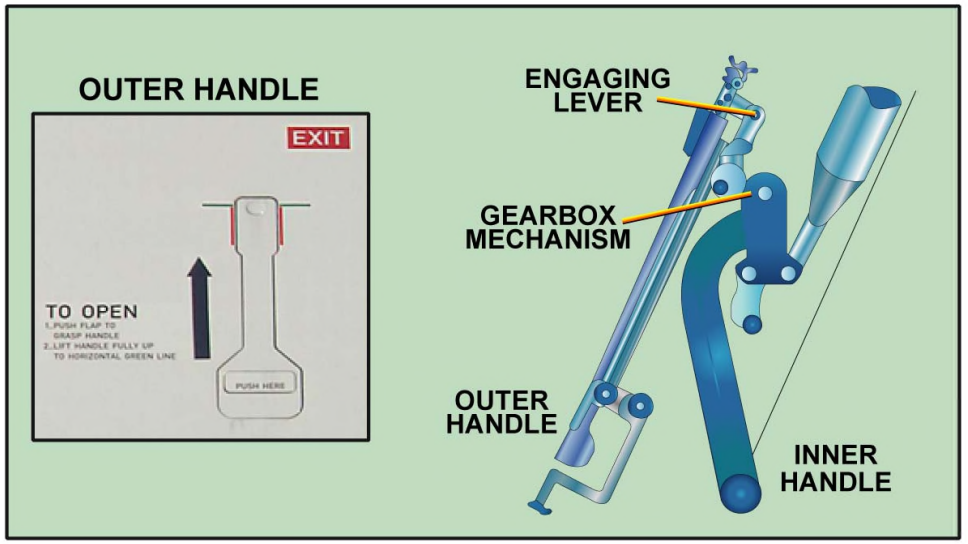
PASSENGER DOOR CONTROL MECHANISM D/O (3)

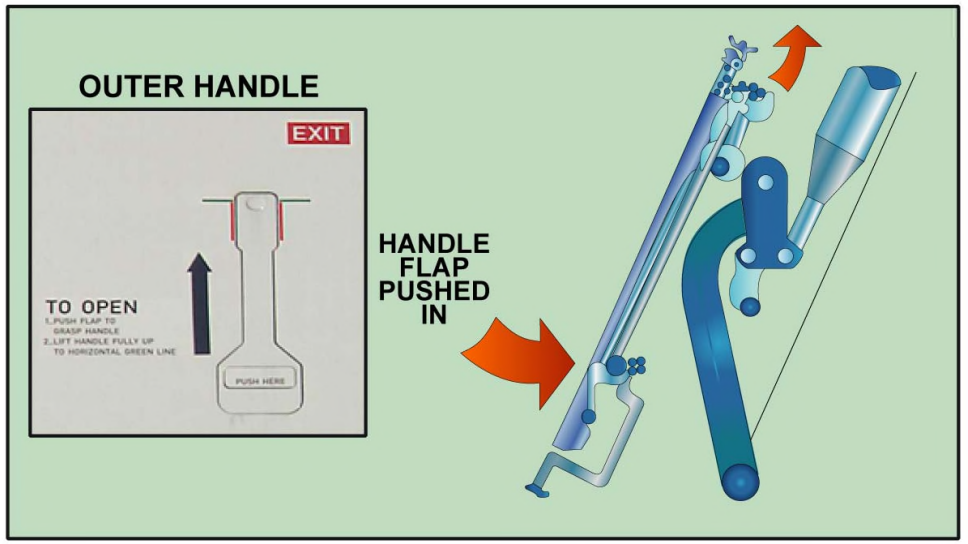
HANDLE OPERATION

The inner and outer handles operate the locking mechanism via a gearbox. The gearbox insures that the outer handle does not move when the inner handle is operated. When the handle flap is flush with the fuselage, the engaging lever is not engaged and the outer handle is not connected. When the handle flap is pushed in, it engages the engaging lever. This connects the outer handle to the system.

G7508471 - G3NT1T0 - FM52D1F52A70102







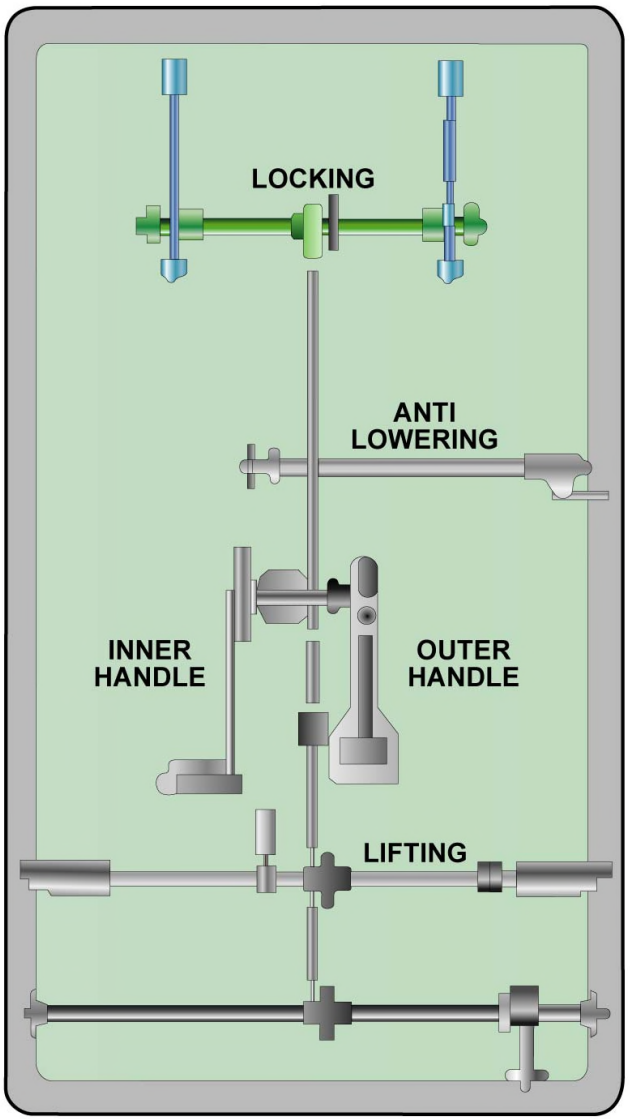
HANDLE OPERATION

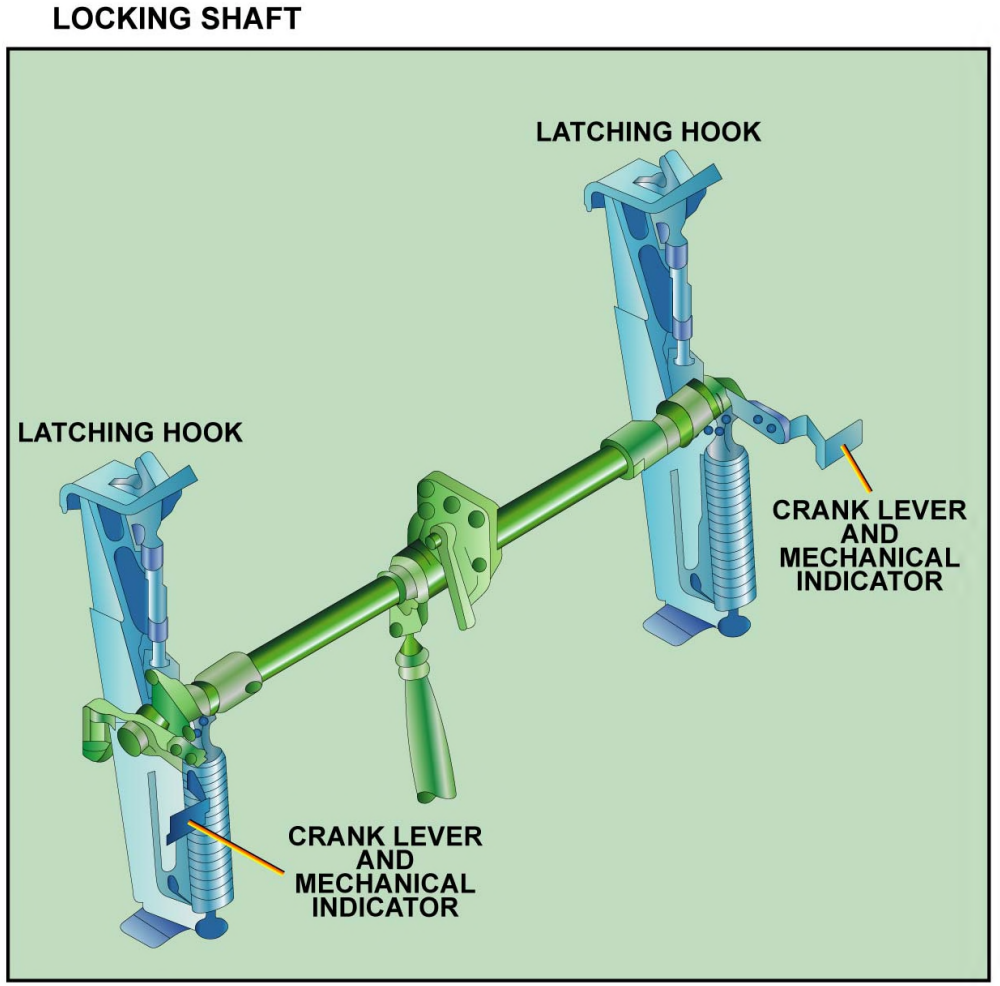
PASSENGER DOOR CONTROL MECHANISM D/O (3)

LOCKING

The locking shaft keeps the passenger door in the closed position with two latching hooks. Each crank lever has a mechanical visual indicator. When the passenger door is locked, two springs hold the locking shaft in an overcenter position.

G7508471 - G3NT1T0 - FM52D1F52A70102


LOCKING
ANTI LOWERING
INNER HANDLE
OUTER HANDLE
LIFTING


LOCKING SHAFT
LATCHING HOOK
LATCHING HOOK
CRANK LEVER AND MECHANICAL INDICATOR
CRANK LEVER AND MECHANICAL INDICATOR

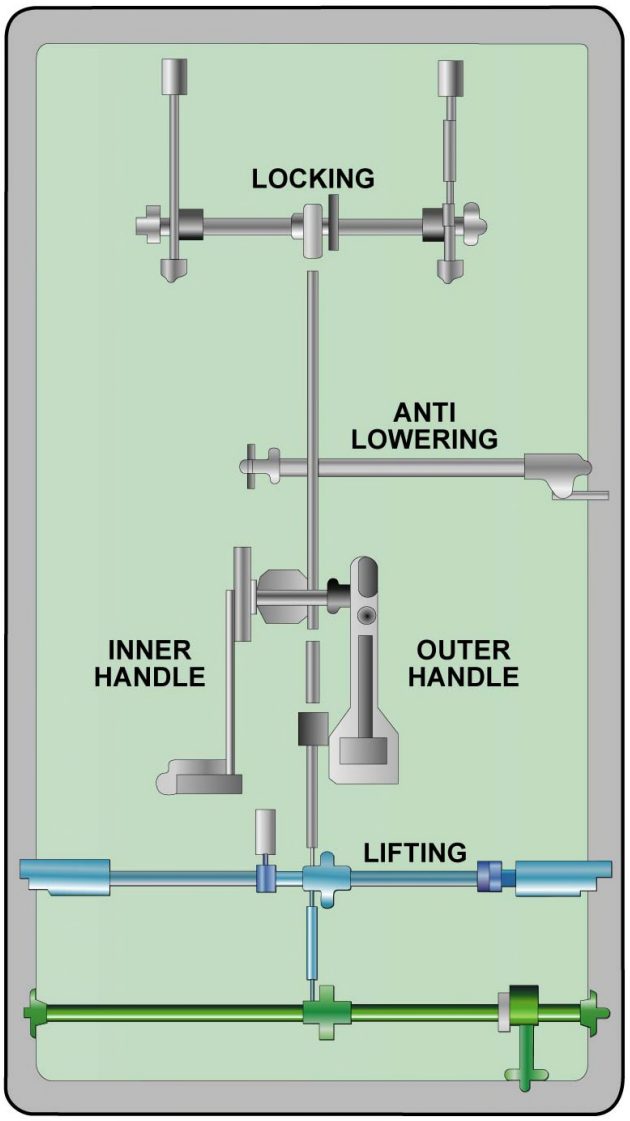
LOCKING

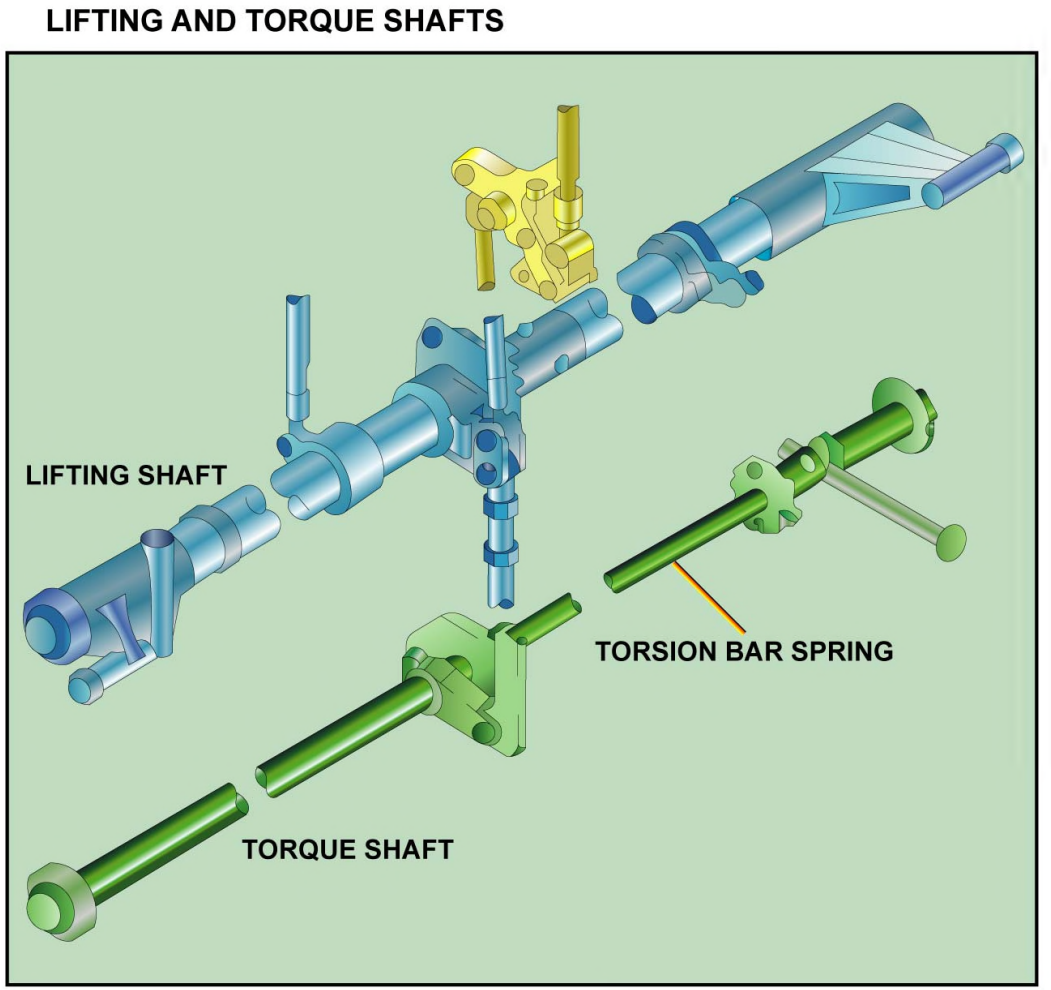
PASSENGER DOOR CONTROL MECHANISM D/O (3)

LIFTING

The lifting shaft enables the door to be lifted clear of the stop fittings during opening of the door and lowers the door for closing. The torque shaft and torsion bar spring compensate the door weight.

G7508471 - G3NT1T0 - FM52D1F52A70102





LIFTING

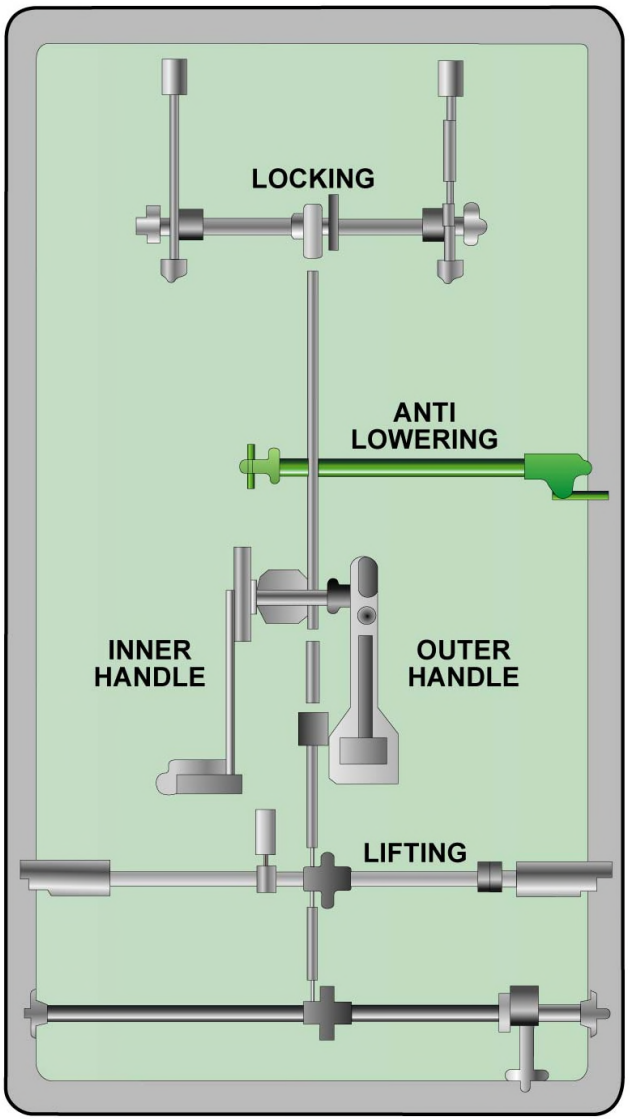
G7508471 - G3NT1T0 - FM52D1F52A70102

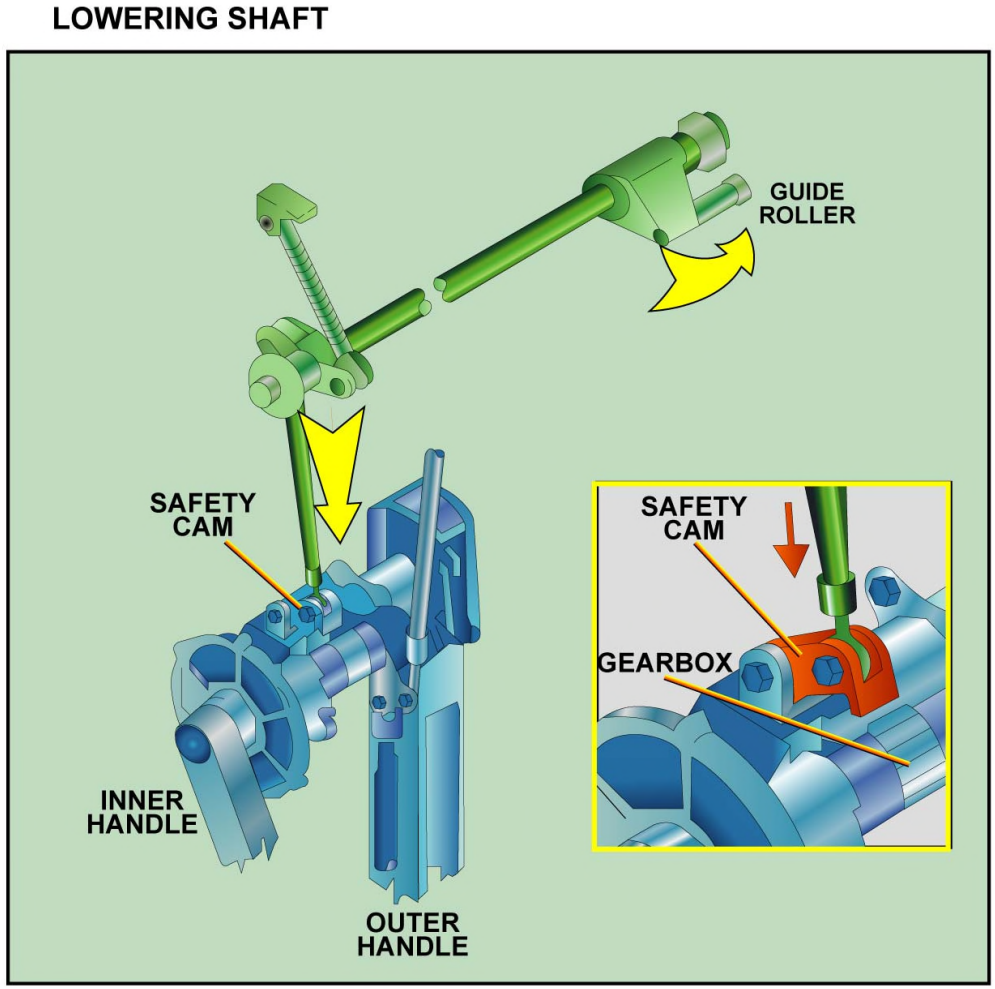
PASSENGER DOOR CONTROL MECHANISM D/O (3)

LOWERING

The lowering shaft acts on a safety cam to block the gearbox when the door is in the open position. As soon as the door is no longer in contact with the doorframe, the lowering shaft rotates the safety cam to lock the gearbox and thus prohibits lowering of the door.

G7508471 - G3NT1T0 - FM52D1F52A70102


LOCKING
ANTI LOWERING
INNER HANDLE
OUTER HANDLE
LIFTING


LOWERING SHAFT
GUIDE ROLLER
SAFETY CAM
INNER HANDLE
OUTER HANDLE
SAFETY CAM
GEARBOX

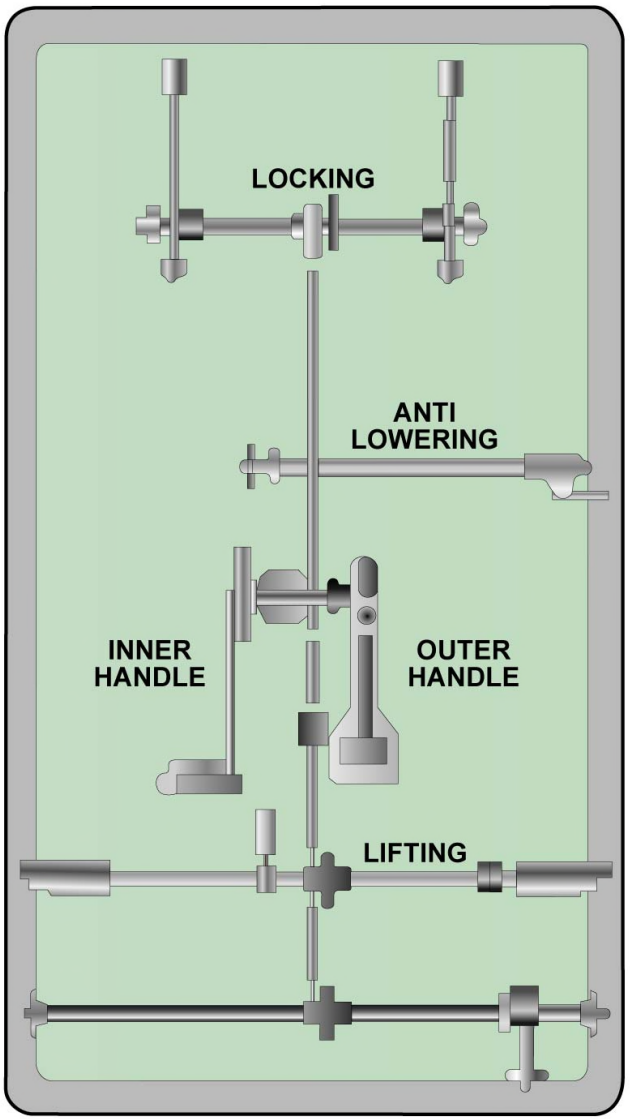
LOWERING

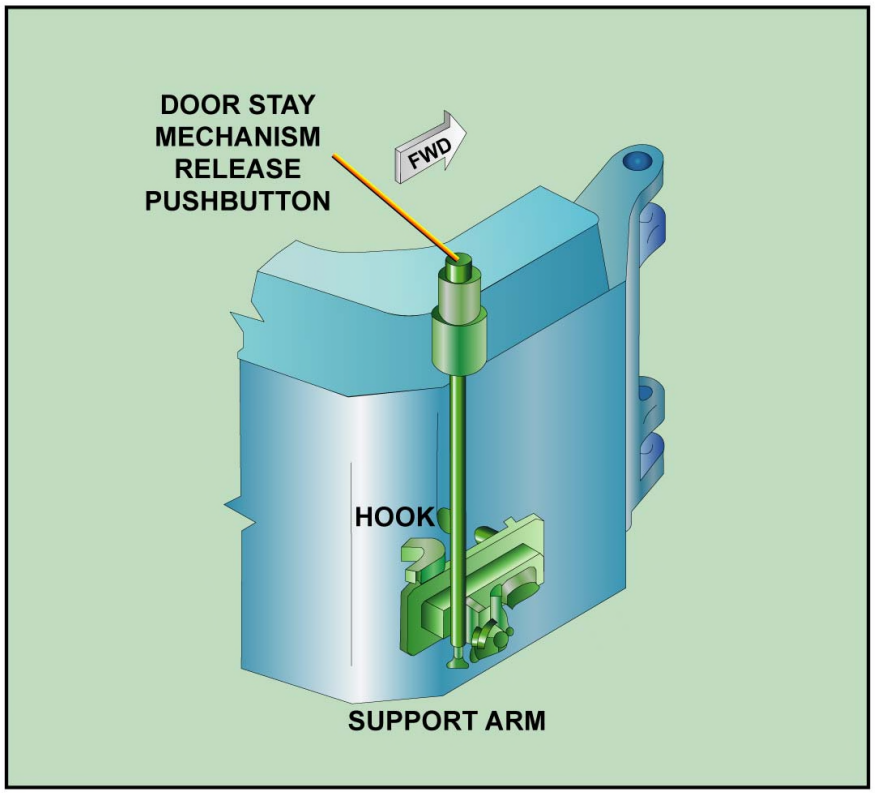
PASSENGER DOOR CONTROL MECHANISM D/O (3)

STAY MECHANISM

The door stay mechanism is installed in the support arm. It has a hook which holds the door in position when it is fully opened. All the support arms are interchangeable. Depending on the side the support arm is installed (RH or LH) the door stay mechanism position is maintained.

G7508471 - G3NT1T0 - FM52D1F52A70102





STAY MECHANISM

DOORS ESCAPE FACILITY RELEASE MECHANISM D/O (3)

GENERAL

The emergency escape-slide release mechanism helps to open the door in emergency and releases the emergency escape slide.
The main functions of the escape facility release mechanism are:
- arming lever safety pin,
- outside disarming,
- cylinder arming,
- girt bar operation.

SAFETY PIN

The safety pin locks the arming lever in the DISARMED position only. In ARMED mode, the lever cannot be locked to allow outside opening. Thus the safety pin must be stowed on the slide cover.

OUTSIDE DISARMING

When the outer handle is operated and the arming lever is in ARMED position, the cam returns the arming lever to the DISARMED position and the system cam in disarmed mode. The inner handle slides in the cam disk, and does not affect the arming lever position.

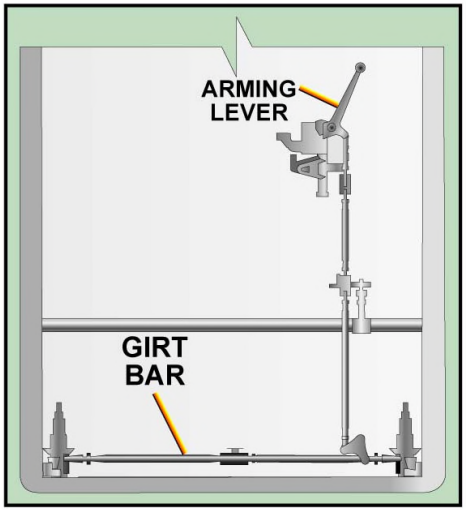
CYLINDER ARMING

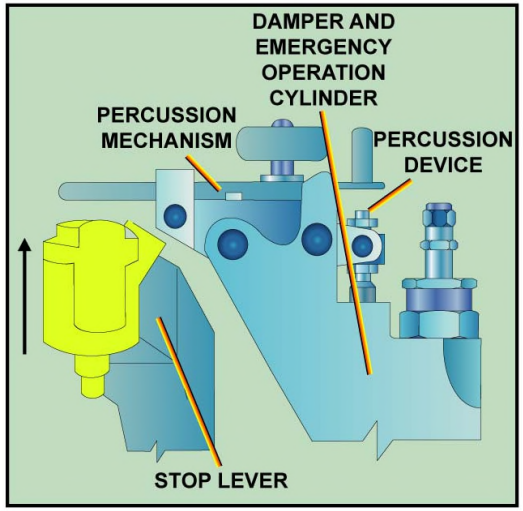
When the arming lever is in ARMED position, the stop lever is positioned underneath the percussion mechanism of the emergency operation cylinder.

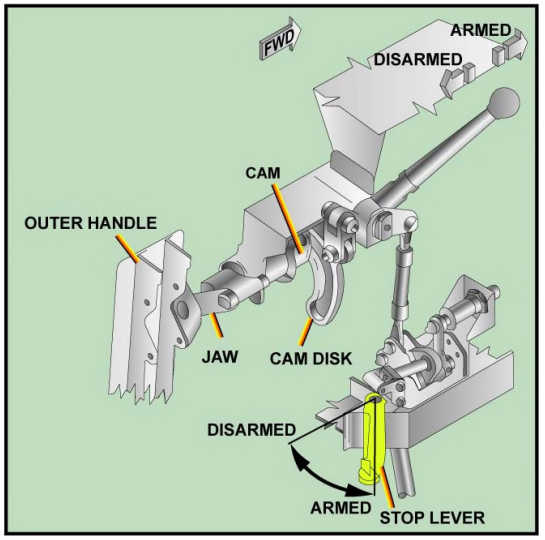
GIRT BAR

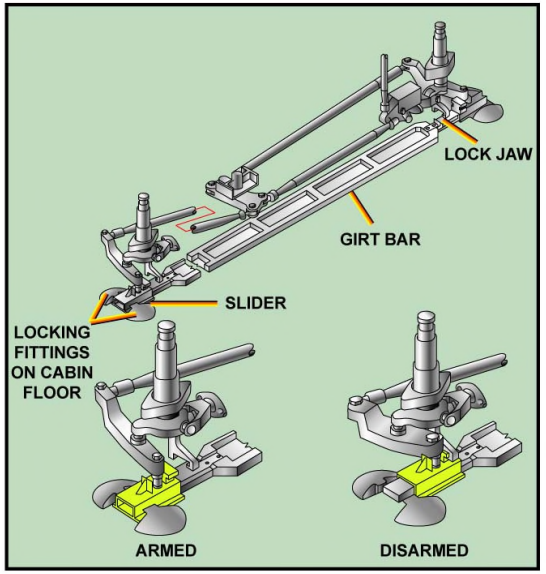
There is a slider on each end of the girt bar. The sliders lock the girt bar to the locking fittings when the system is in ARMED mode. The lock jaws hold the sliders to the door when the system is in DISARMED mode.

G7508471 - G3NT1T0 - FM52D2F52A80102









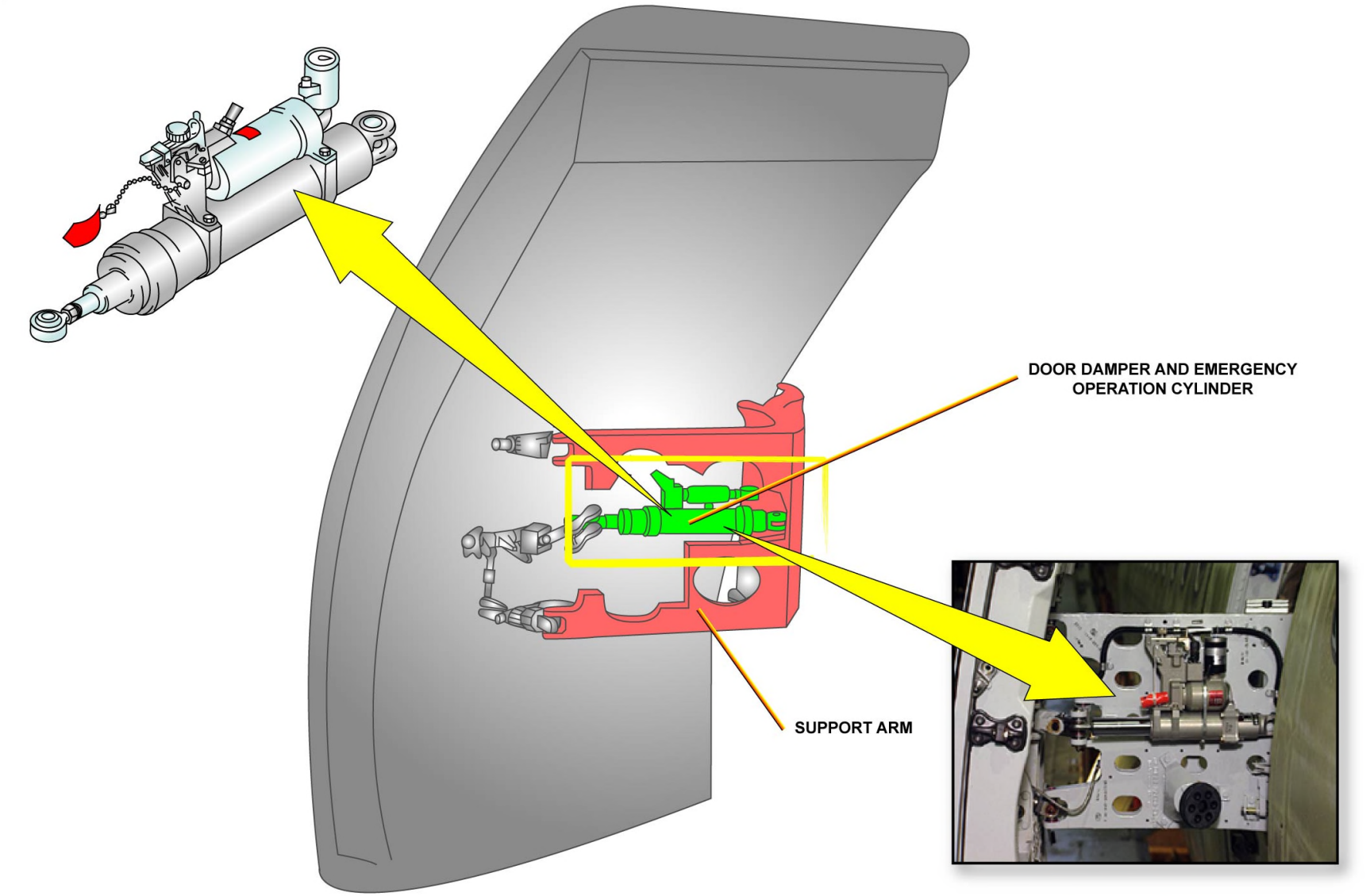
GENERAL ... GIRT BAR

DOORS ESCAPE FACILITY RELEASE MECHANISM D/O (3)

DAMPER EMERGENCY CYLINDER

The damper and emergency operation cylinder, located on the support arm, damps door movement during opening and closing sequences.

G7508471 - G3NT1T0 - FM52D2F52A80102



DAMPER EMERGENCY CYLINDER

DOORS ESCAPE FACILITY RELEASE MECHANISM D/O (3)

DOOR DAMPER FUNCTION

The door damper cylinder function is to damp door movement during opening and closing, in windy conditions for example. Damping is done by hydraulic fluid going through a restrictor as the operating rods extend or retract.

EMERGENCY FUNCTION

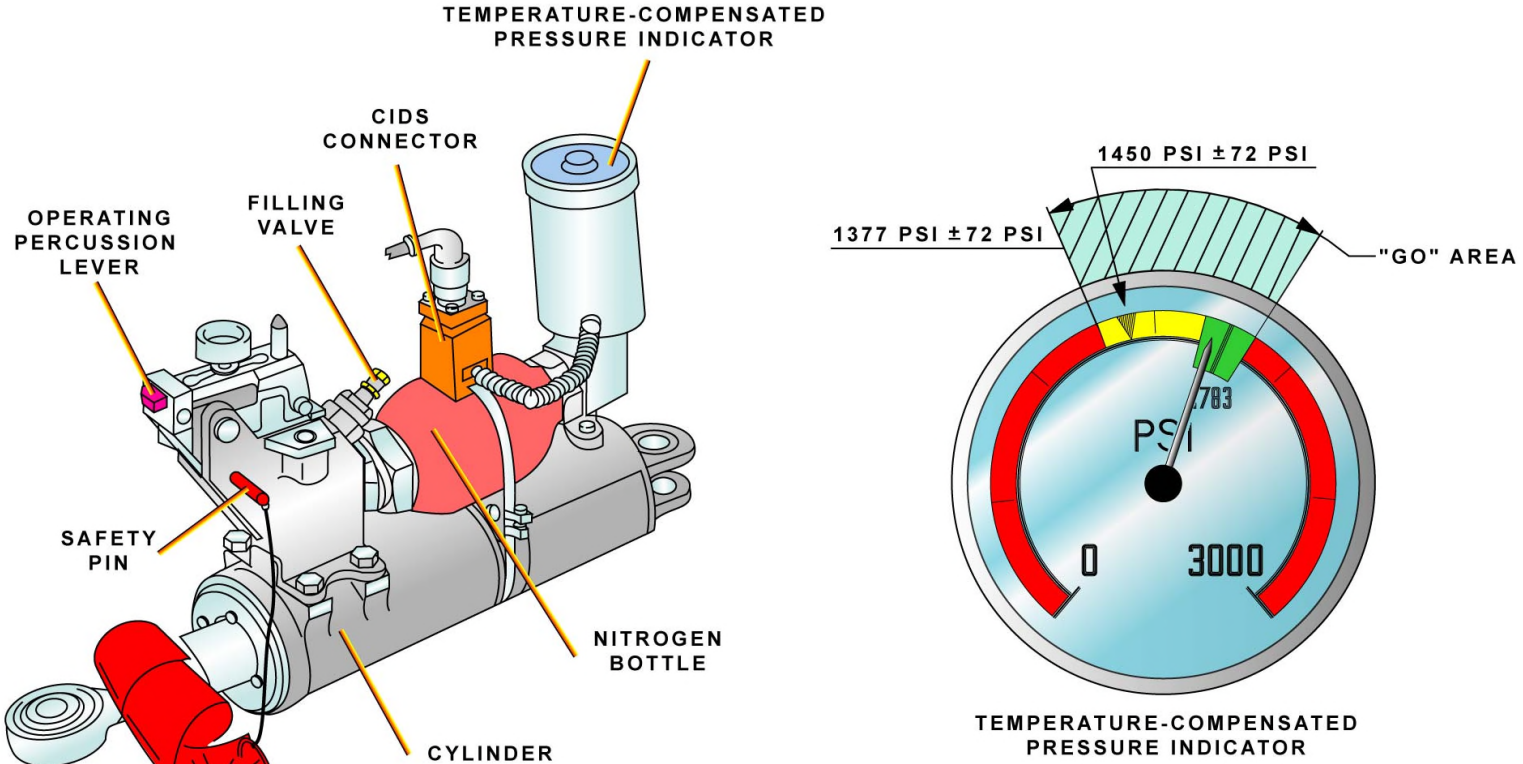
The damper and emergency operation cylinder forms an emergency actuator that assists and improves the opening speed of the door in emergency conditions. When opened in an emergency situation, the operating percussion lever lets the nitrogen bottle pressure act upon the piston to push it out.

NOTE: The door can be closed after an emergency opening.

INDICATION

A low pressure in the door damper cylinders is monitored by the CIDS and displayed on the FAP.
For dispatch functions, an indicator mounted on the cylinder can be used. As long as the needle is not in the red band, the door damper cylinder is considered serviceable.

G7508471 - G3NT1T0 - FM52D2F52A80102



WITH TEMPERATURE-COMPENSATED PRESSURE INDICATOR AND CIDS CONNECTOR

DOOR DAMPER FUNCTION ... INDICATION

G7508471 - G3NT1T0 - FM52D2F52A80102

DOORS ESCAPE FACILITY RELEASE MECHANISM D/O (3)

CYLINDER DEACTIVATION

Several tasks have to be carried out to deactivate the door damper cylinder. To disarm the system:
- the safety pin must be installed,
- cut and discard the lock wire,
- loosen the knurled screw,
- pull the operating striker lever to the rear to disarm it,
- tighten the knurled screw.

CYLINDER ACTIVATION

Several tasks have to be carried out to activate the door damper cylinder.
To activate the system:
- loosen the knurled screw,
- push the operating striker lever to the front to arm it,
- tighten the knurled screw,
- safety the knurled screw with the lock wire,
- remove the safety pin.

This video shows how to reactivate the door cylinder.

G7508471 - G3NT1T0 - FM52D2F52A80102

CYLINDER DEACTIVATION & CYLINDER ACTIVATION

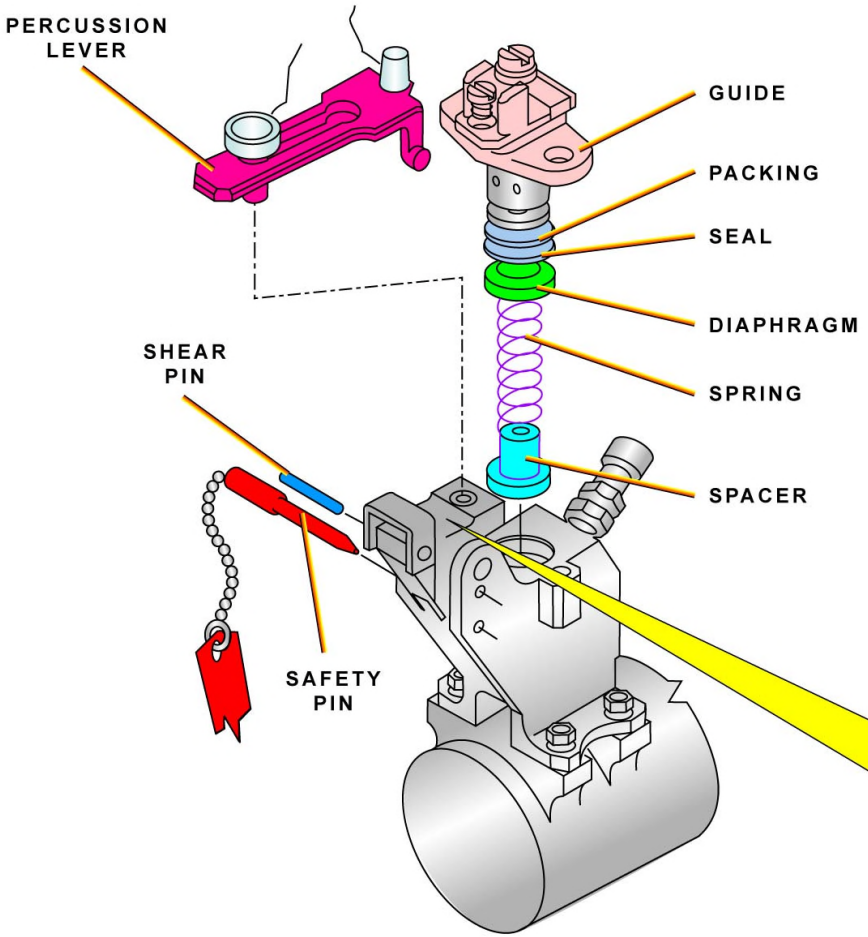
DOORS ESCAPE FACILITY RELEASE MECHANISM D/O (3)

SERVICING

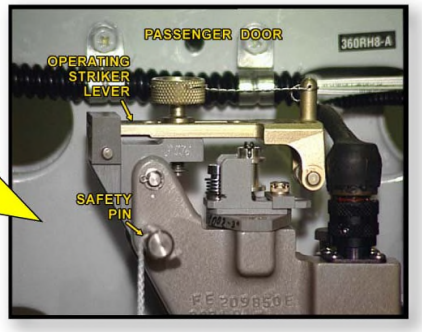
After an emergency operation of the door, the nitrogen bottle has to be refilled, using the filling valve. Remove the broken pieces of the shear pin and the damaged diaphragm after an emergency operation. Install a new shear pin and a new diaphragm.

NOTE: To fill the nitrogen bottle, take into account the temperature and pressure chart values, if the damper/emergency cylinder does not have a temperature-compensated pressure indicator.

G7508471 - G3NT1T0 - FM52D2F52A80102



TEMP (°C)	PRESSURE (PSI±5%)
+50	1950
+40	1880
+30	1810
+20	1740
+10	1660
0	1610
-10	1540
-20	1465
-30	1395
-40	1325



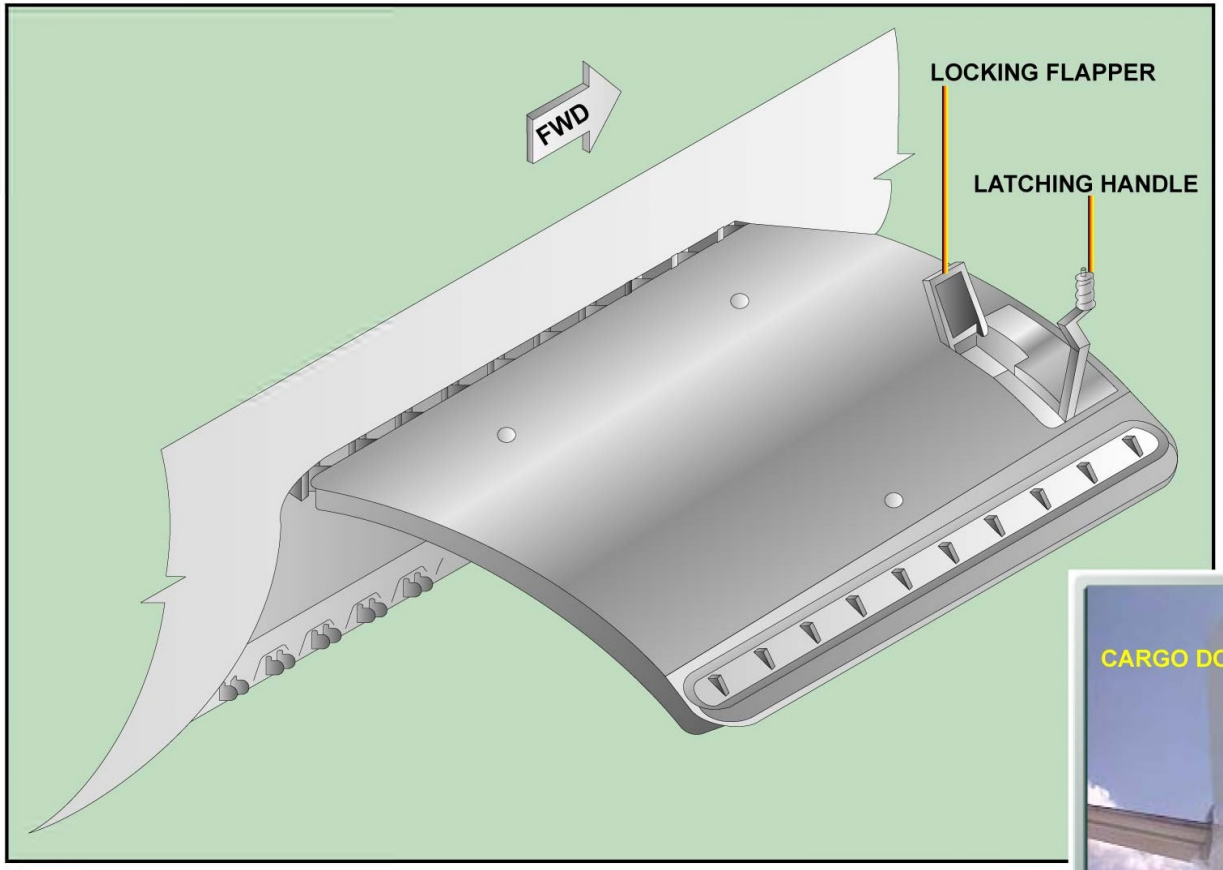
SERVICING

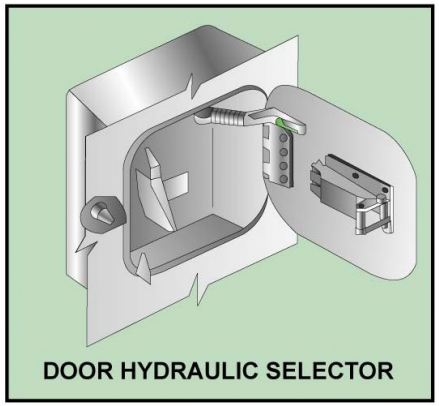
FORWARD AND AFT CARGO DOORS D/O (3)

CARGO DOOR OPENING WITH ELECTRIC PUMP

The FWD and the aft cargo doors are identical in design and in operation. The two doors can be opened simultaneously. For each door, the sequence of operation is written on the fuselage. A platform is required to gain access to the door operation controls. Push the handle flap in and pull the locking handle to the unlocked position. Stop the opening procedure if the red warning light flashes. Verify that all indicator flags are out. Make sure that the door can be opened freely. Release and pull the latching handle from the recess to the unlatched position. The door moves freely from the frame. Set the selector to OPEN. The yellow electric pump runs and the door starts to open. When the door is up and locked, the green light comes on. As soon as the light is on, the selector must be released. The electric pump continues to run for a few seconds after the selector is released. The procedure is now completed.

G7508471 - G3NT1T0 - FM52D7F52D30102





CARGO DOOR OPENING WITH ELECTRIC PUMP

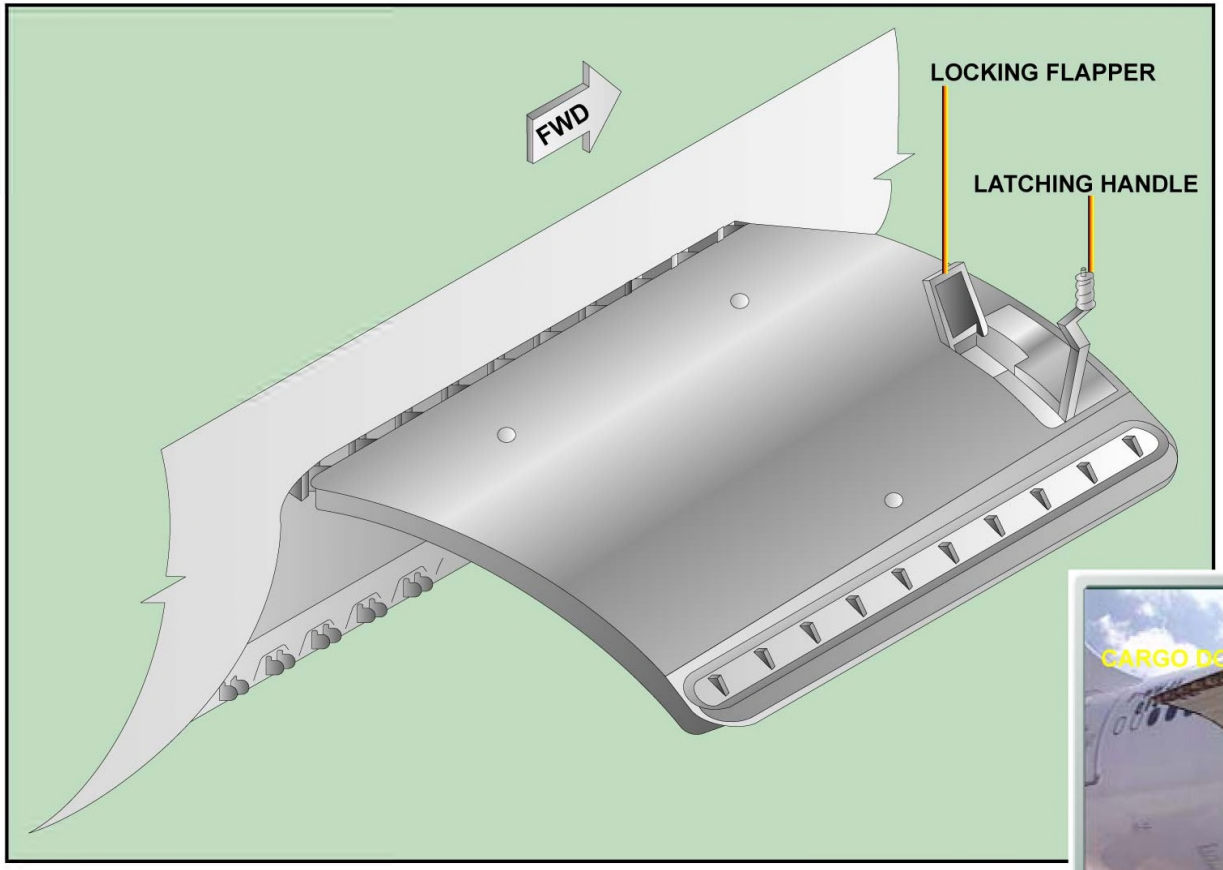
G7508471 - G3NT1T0 - FM52D7F52D30102

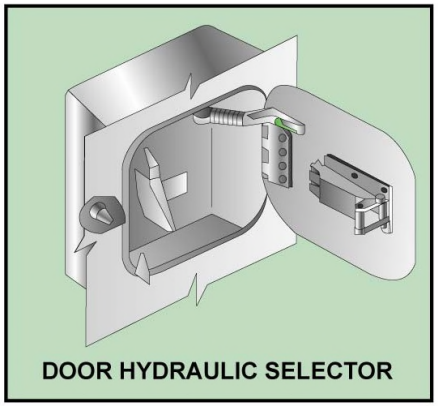
FORWARD AND AFT CARGO DOORS D/O (3)

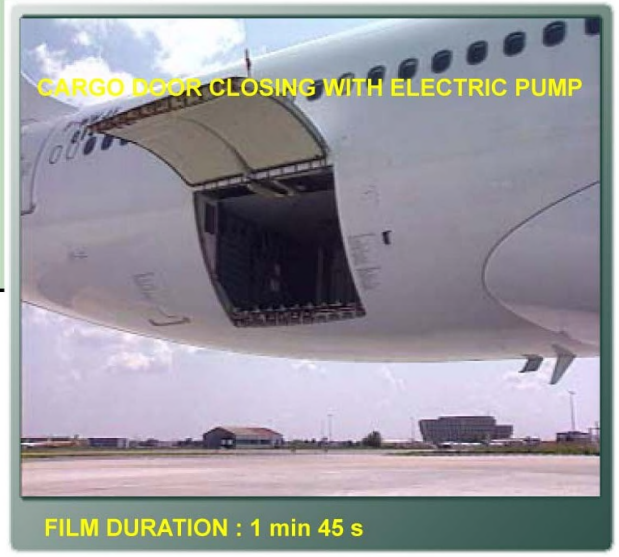
CARGO DOOR CLOSING WITH ELECTRIC PUMP

As for the opening, we will show the aft cargo door operation which is similar to the FWD one. The instructions for closing are written on the fuselage. A platform is required because of the height of the A/C. Make sure that the sill latches are up and that the door can close freely. Set the selector to CLOSE. The electric pump runs and the door starts to close. When you reach the second detent of the lever, the green light goes off. Release the selector when the door is in contact with the frame. The electric pump continues to run for a few seconds. Push the latching handle into the recess. Push the locking flapper down to the locked position. Make sure that all indicator flags are flush with the surface of the door. The door closing procedure using the electric pump is now completed.

G7508471 - G3NT1T0 - FM52D7F52D30102







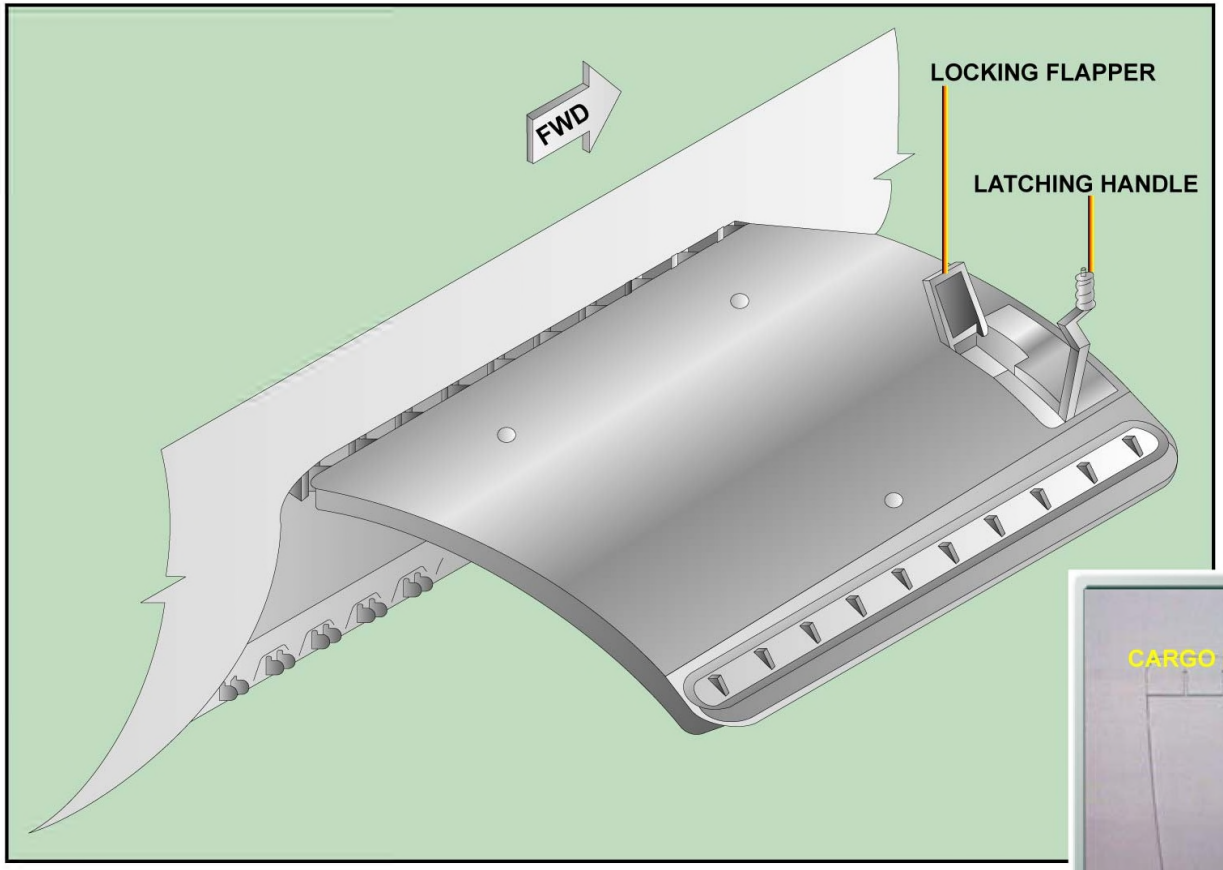
CARGO DOOR CLOSING WITH ELECTRIC PUMP

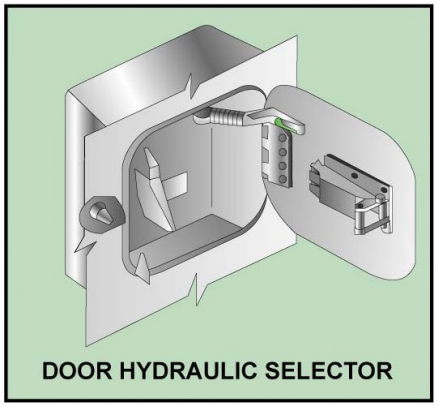
FORWARD AND AFT CARGO DOORS D/O (3)

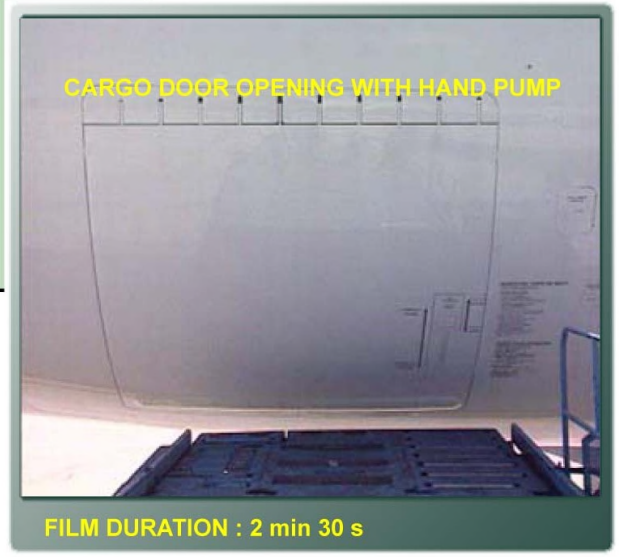
CARGO DOOR OPENING WITH HAND PUMP

When the normal operation is not possible, the cargo doors can be operated using the hand pump fitted on the yellow hydraulic ground service panel. As for normal operation, we will operate the aft cargo door only, but its operation is identical to the FWD one. Manual operation requires two operators. The door is unlatched and unlocked following the same sequence of operation as for the normal opening. Take the pump handle on the green hydraulic ground service panel. Install the handle on the hand pump located on the yellow hydraulic ground service panel. On the door, operator 1 sets the selector to OPEN. Operator 2 starts to pump. The hand pump is of the double flow type. When the door is opened and locked, operator 1 releases the manual selector valve and operator 2 removes the handle and closes the access door. Then he restows the handle on the green hydraulic ground service panel.

G7508471 - G3NT1T0 - FM52D7F52D30102







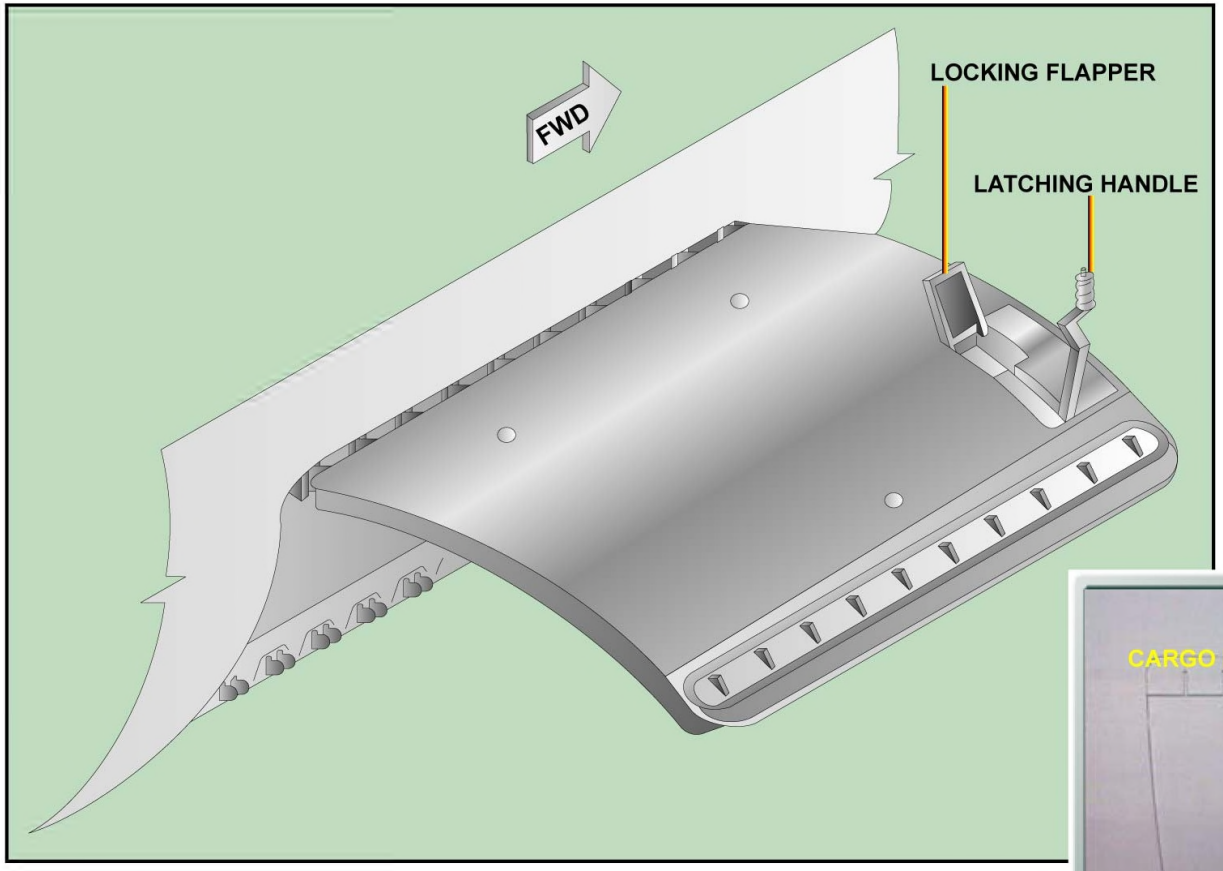
CARGO DOOR OPENING WITH HAND PUMP

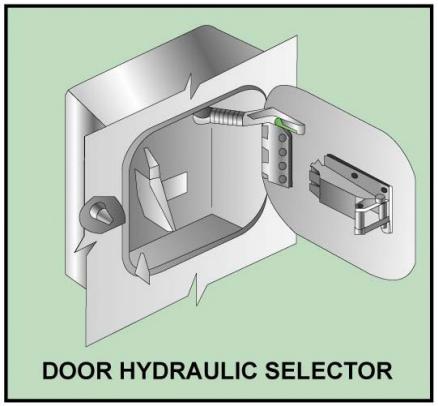
FORWARD AND AFT CARGO DOORS D/O (3)

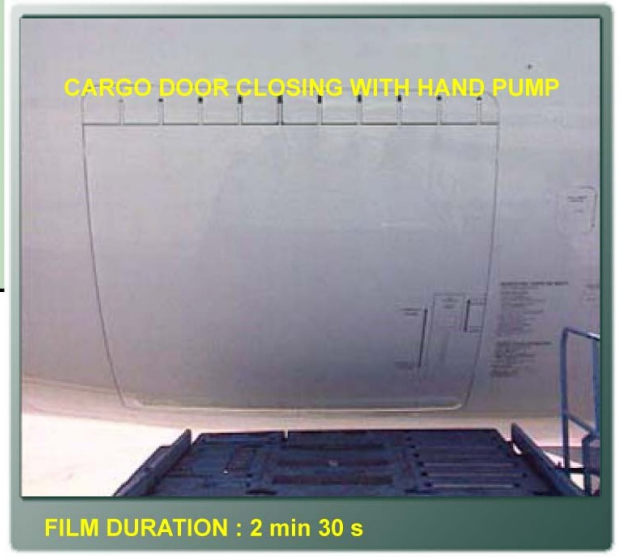
CARGO DOOR CLOSING WITH HAND PUMP

To close the cargo door using the hand pump, two operators are required. Connect the hand pump on the yellow hydraulic ground service panel. On the cargo door, make sure that the sill latches are up and that the door can close freely. On the manual selector valve, select the CLOSE position. The selector stops at the first detent. As soon as operator 2 starts to pump, the selector can be moved to the second detent. The door starts to close. Release the selector when the door is in contact with the frame. Operator 2 can stop pumping. Operator 1 can thus push back the latching handle and the locking flapper down to the locked position. He also makes sure that all indicator flags are flush with the door. Operator 2 can now restow the handle on the green hydraulic ground service panel and close the access.

G7508471 - G3NT1T0 - FM52D7F52D30102







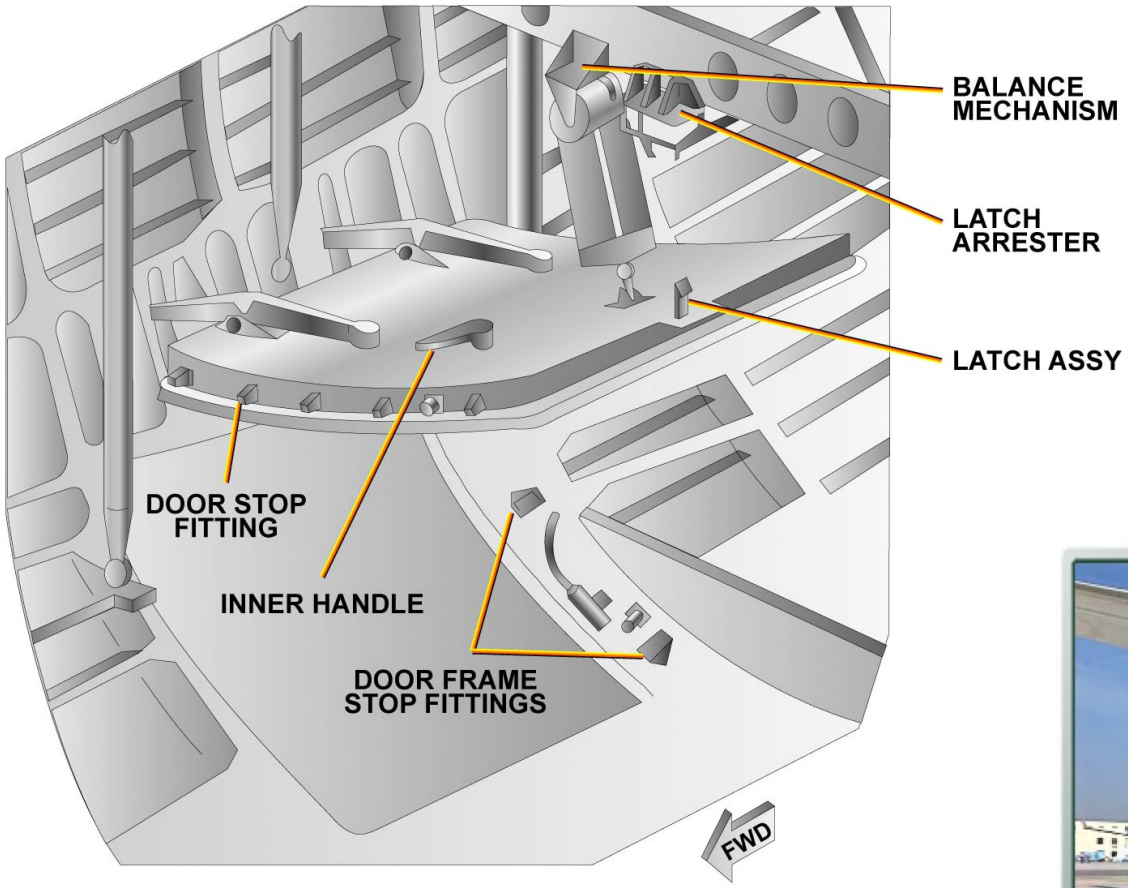
CARGO DOOR CLOSING WITH HAND PUMP

CARGO DOORS BULK OPERATION D/O (3)

OPENING

A platform is necessary to gain access to the bulk cargo door. The operating procedure is written on the fuselage. Push the P/B of the outer handle to release it from its recess. Move the outer or the inner handle to the OPEN position. Push the bulk cargo door partly inwards, then put the door handle to the locked position. Move the door inwards until the hook engages with the hook arrester.

G7508471 - G3NT1T0 - FM52D8F52E20102


BALANCE MECHANISM
LATCH ARRESTER
LATCH ASSY
DOOR STOP FITTING
INNER HANDLE
DOOR FRAME STOP FITTINGS
FWD

BULK CARGO DOOR OPENING
FILM DURATION: 1 min 30 sec

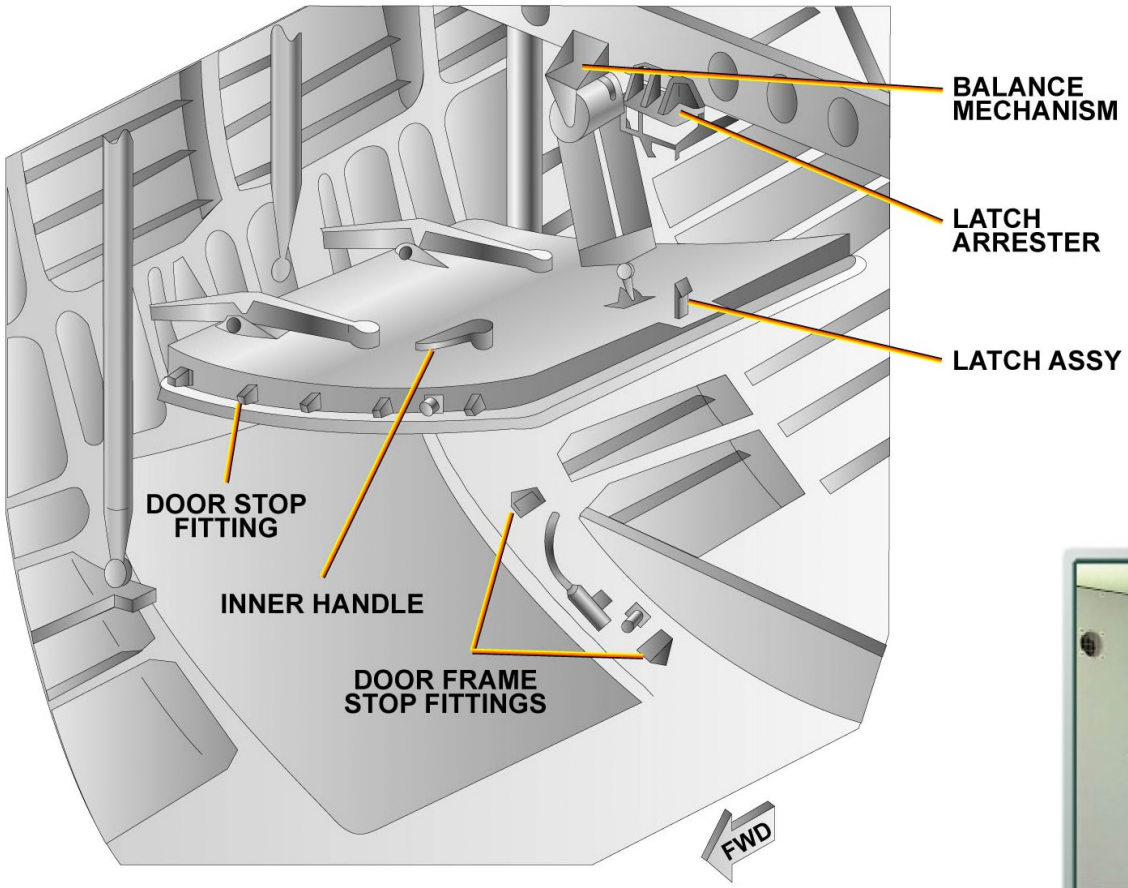
OPENING

CARGO DOORS BULK OPERATION D/O (3)

CLOSING

To close the door, use the outer handle. Move the outer handle to the OPEN position to unlock the door from the hook arrester. Hold the door to prevent it from falling down. Move the bulk cargo door down into the opening, and put the door handle in the locked position. Put the handle back into its recess. Remove the access platform.

G7508471 - G3NT1T0 - FM52D8F52E20102


BALANCE MECHANISM
LATCH ARRESTER
LATCH ASSY
DOOR STOP FITTING
INNER HANDLE
DOOR FRAME STOP FITTINGS
FWD

BULK CARGO DOOR CLOSING
FILM DURATION: 1 min 15 sec

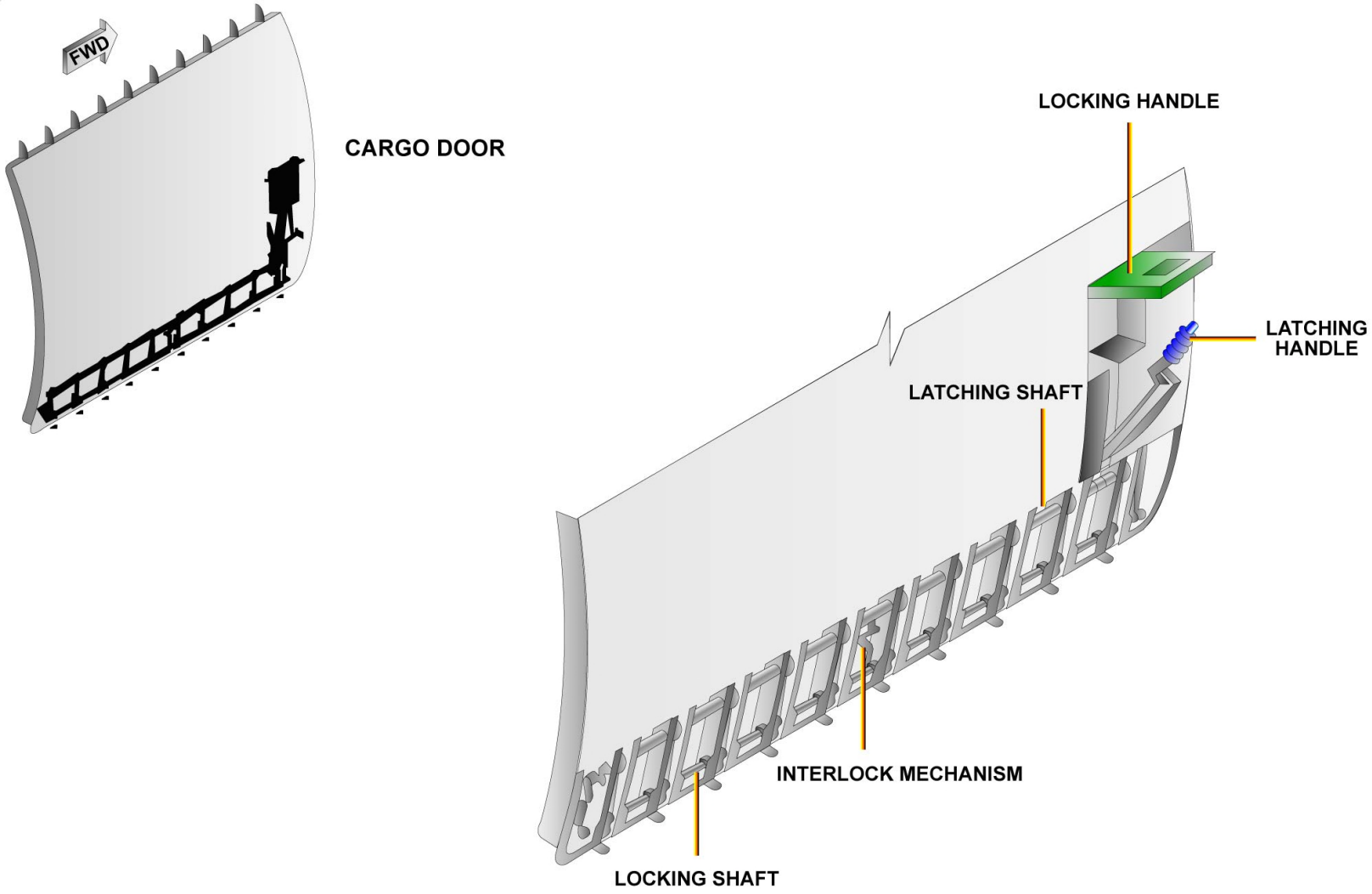
CLOSING

CARGO DOORS LOCKING MECHANISM D/O (3)

GENERAL

The cargo door has a manually operated locking and latching mechanism.
The components of the door mechanism are:
- a locking handle,
- a latching handle,
- a latching mechanism,
- a locking mechanism,
- an interlock mechanism.

G7508471 - G3NT1T0 - FM52D5F52D60102


FWD
CARGO DOOR
LOCKING HANDLE
LATCHING HANDLE
LATCHING SHAFT
INTERLOCK MECHANISM
LOCKING SHAFT

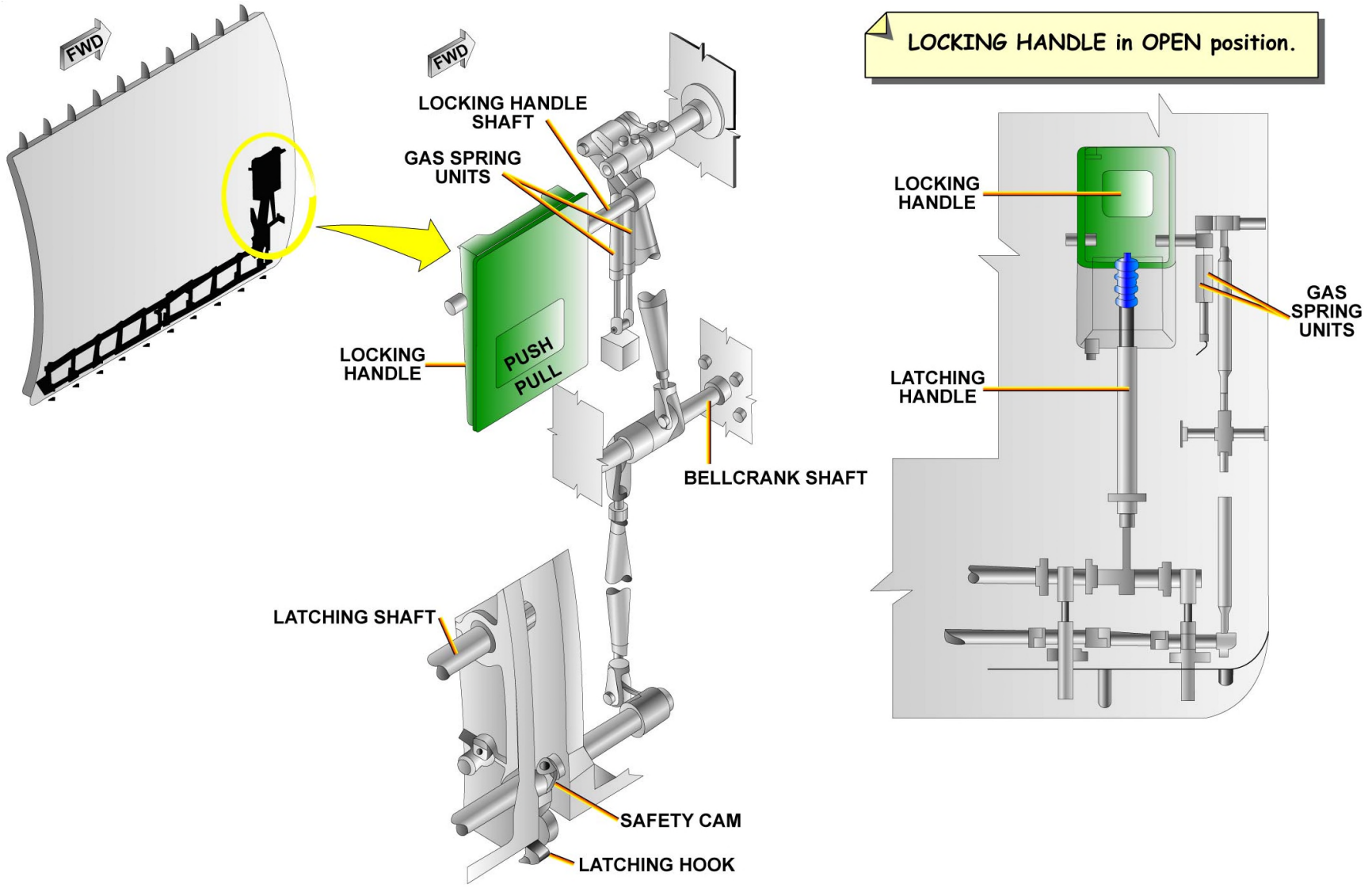
GENERAL

CARGO DOORS LOCKING MECHANISM D/O (3)

LOCKING HANDLE

A spring-loaded closed flap is installed in the locking handle. When the flap is pushed, the locking handle can be pulled to the horizontal position. It is UNLOCKED.
Two gas spring units keep the locking handle in the UNLOCKED or LOCKED position.

G7508471 - G3NT1T0 - FM52D5F52D60102



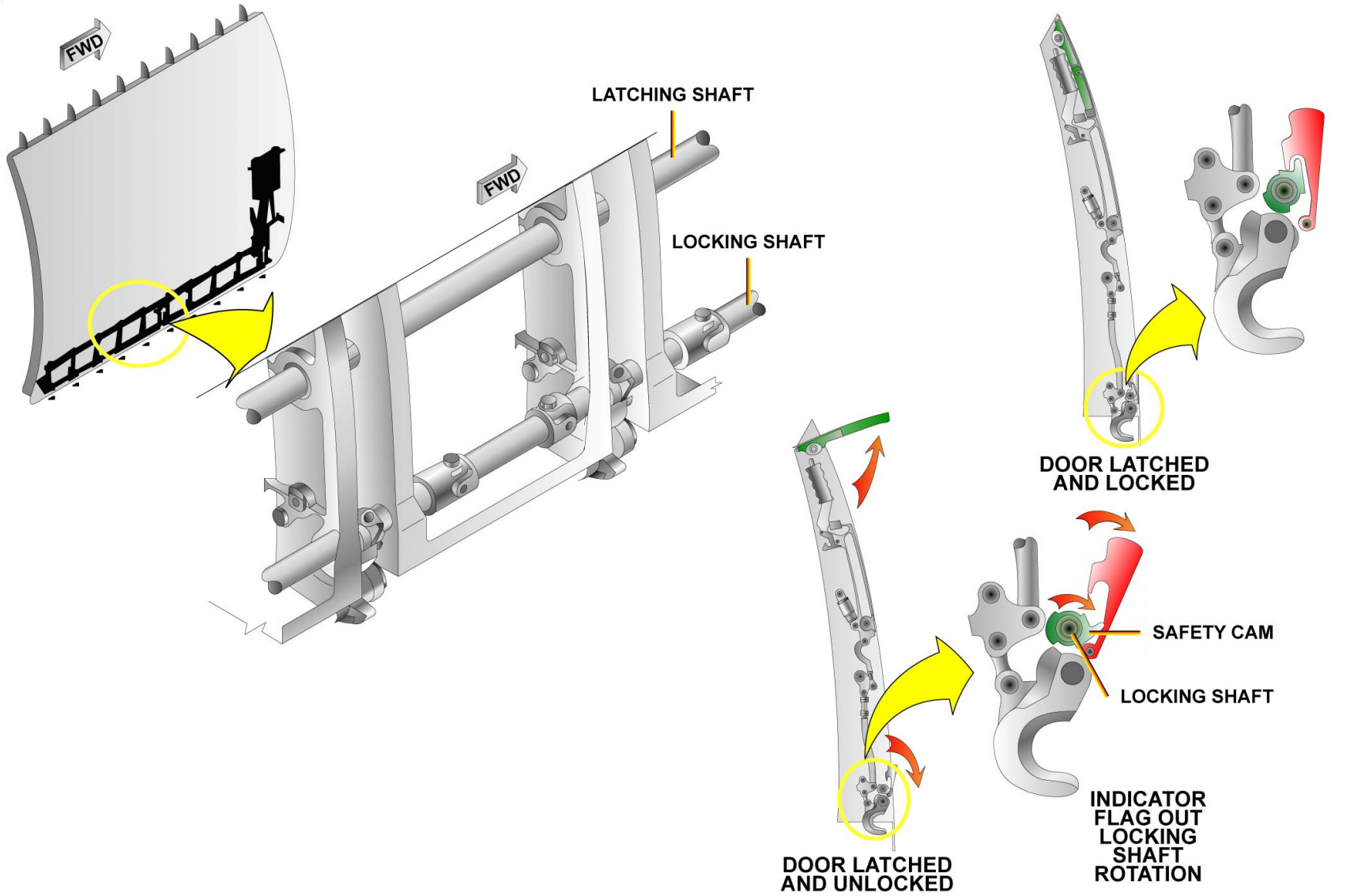
LOCKING HANDLE

CARGO DOORS LOCKING MECHANISM D/O (3)

LOCKING MECHANISM

The locking shaft is fitted with ten safety cams, one per hook in order to prohibit inadvertent hook opening. The indicator flags are also controlled via the safety cams.

G7508471 - G3NT1T0 - FM52D5F52D60102



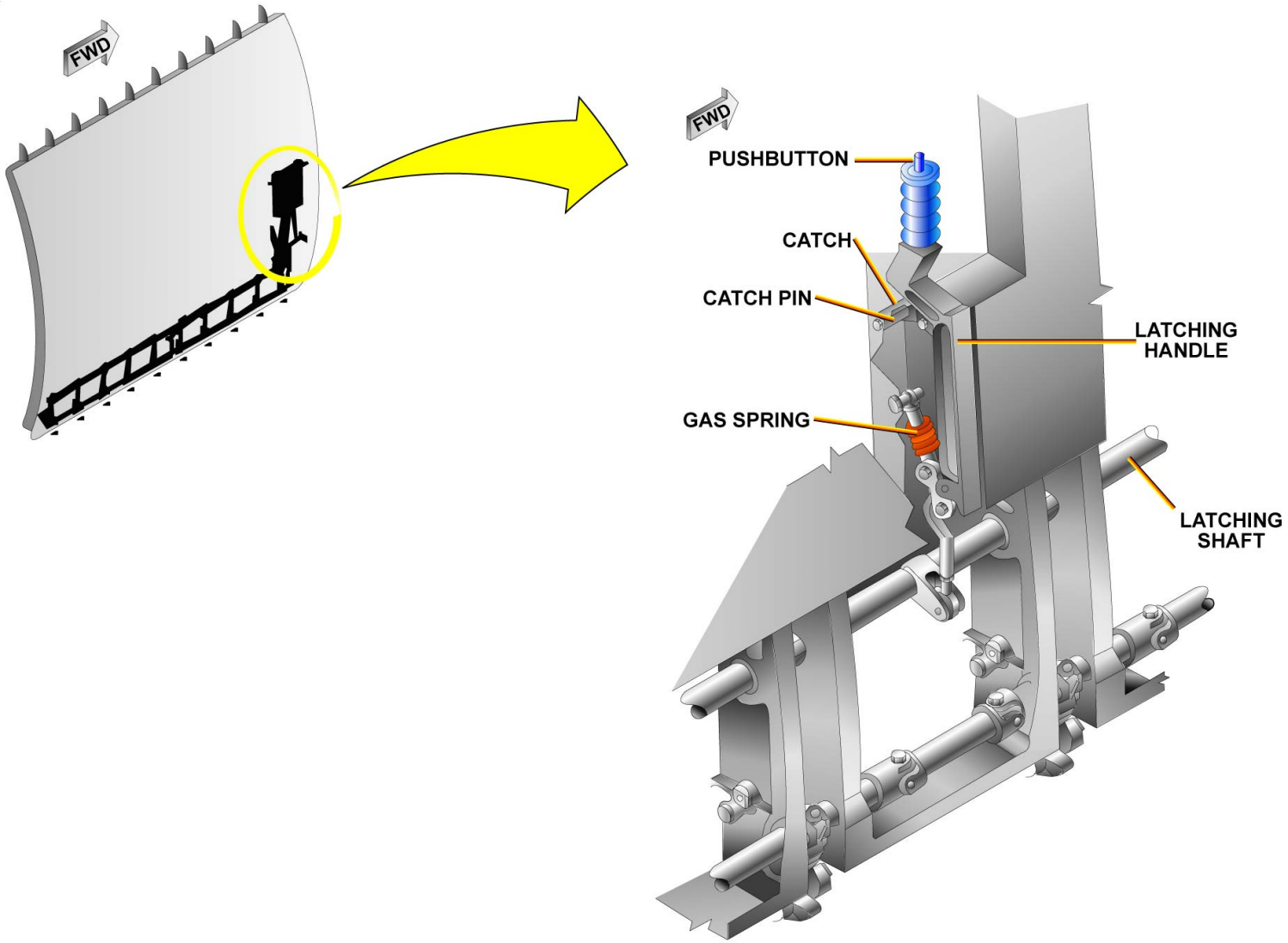
LOCKING MECHANISM

CARGO DOORS LOCKING MECHANISM D/O (3)

LATCHING HANDLE

A gas spring unit keeps the handle in the fully open or fully closed position. A catch, controlled by a P/B, secures the handle in the fully closed position.

G7508471 - G3NT1T0 - FM52D5F52D60102



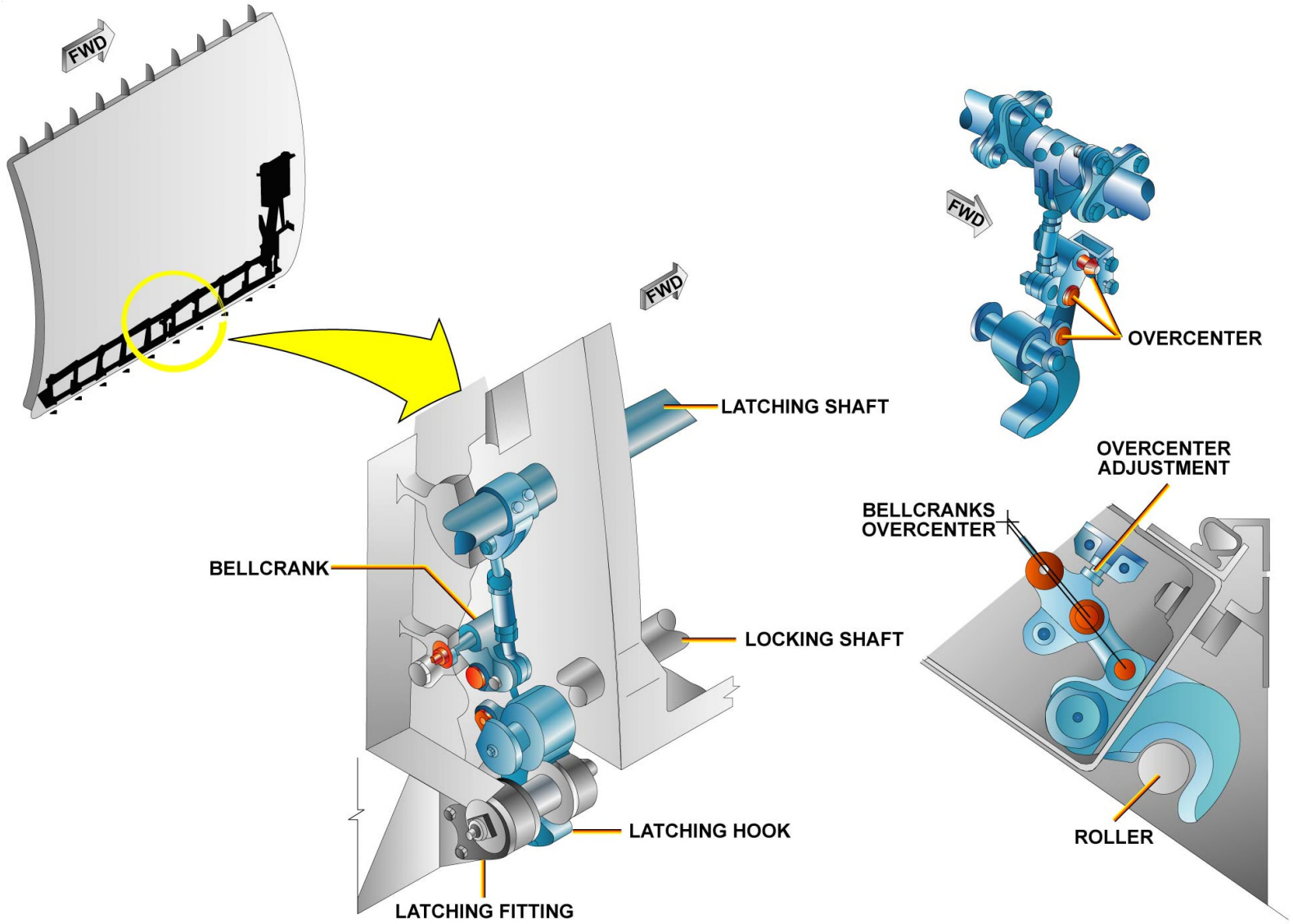
LATCHING HANDLE

CARGO DOORS LOCKING MECHANISM D/O (3)

LATCHING MECHANISM

The latching shaft engages or disengages the hooks by moving the overcentering bellcranks. When the hooks are engaged in side spool fittings on the door frame, they transmit the load from the door to the fuselage.

G7508471 - G3NT1T0 - FM52D5F52D60102



LATCHING MECHANISM

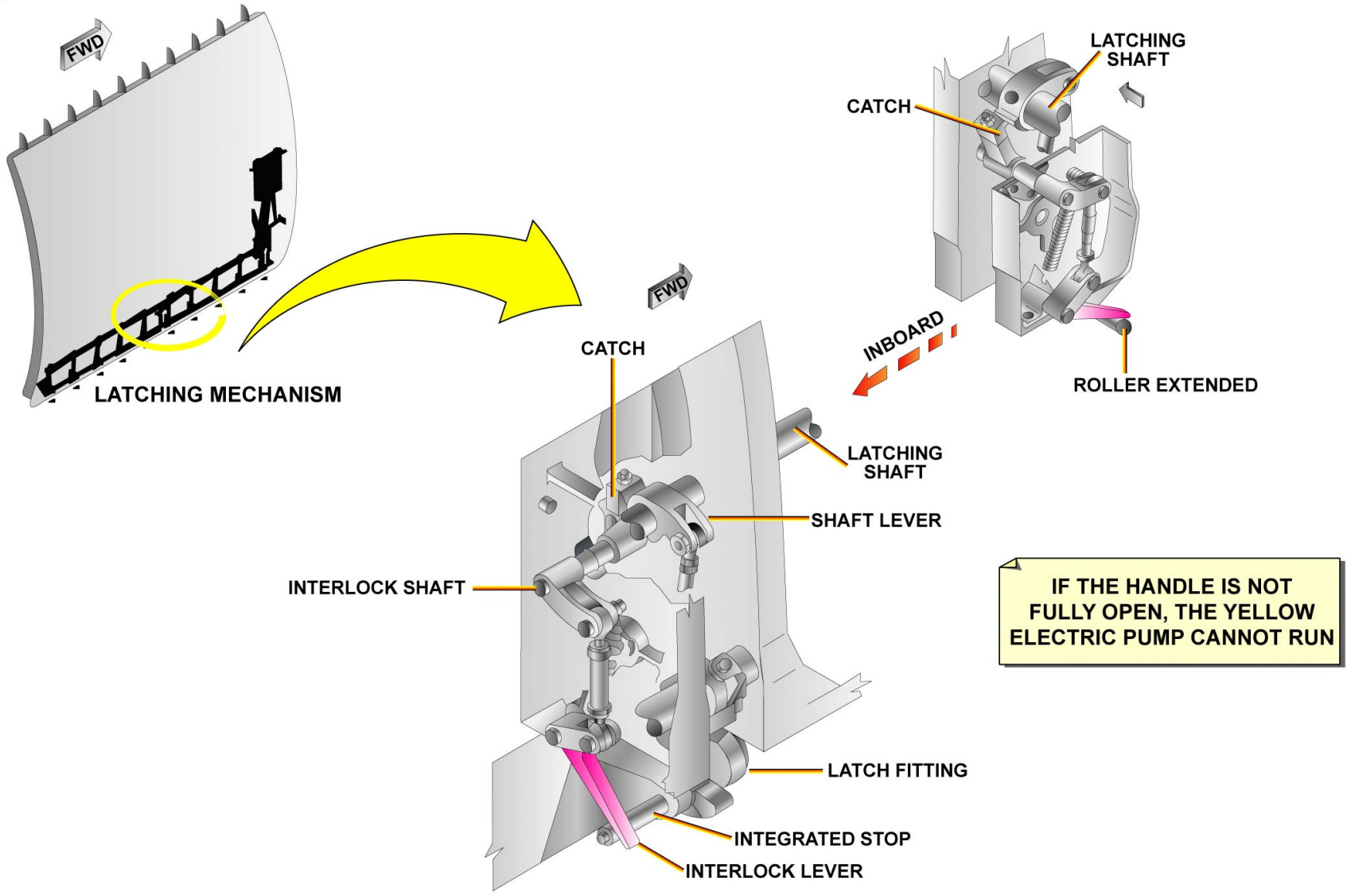
G7508471 - G3NT1T0 - FM52D5F52D60102

CARGO DOORS LOCKING MECHANISM D/O (3)

INTERLOCK MECHANISM

The interlock mechanism blocks the latching shaft as soon as the door is opened.
It is located at the fifth hook. It consists of a catch, which engages the latching shaft and prohibits the shaft rotation and the handle returning to the closed position. When the control lever gets in contact with the axle, it frees the catch and the handles.
If the handle is not fully open, the proximity sensor is far and the yellow electric pump cannot run.

G7508471 - G3NT1T0 - FM52D5F52D60102



INTERLOCK MECHANISM

G7508471 - G3NT1T0 - FM52D5F52D60102

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

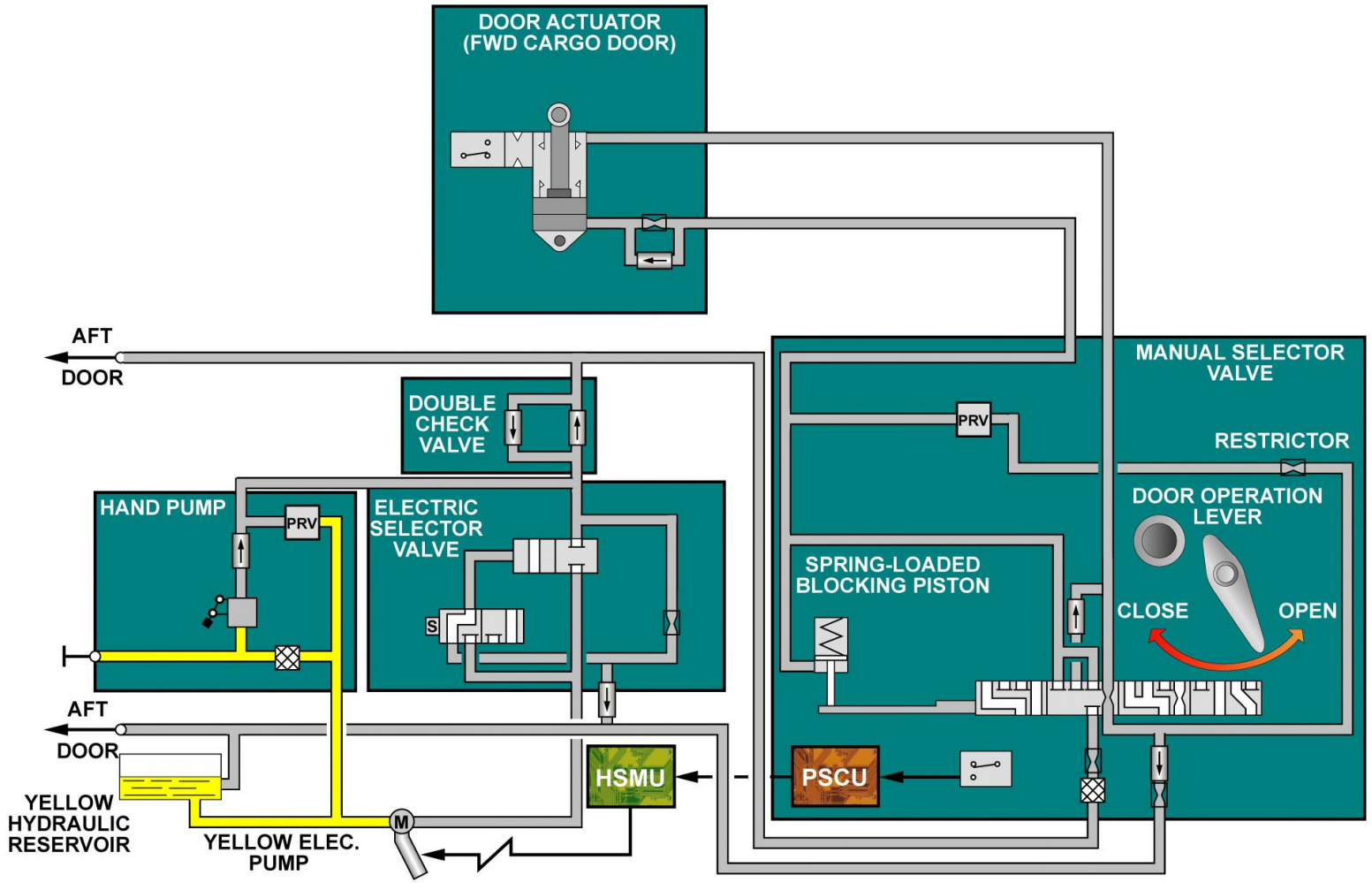
GENERAL

The cargo-compartment door hydraulic-system controls the operation of the FWD and aft cargo-compartment doors. The hydraulic system of each door has a hydraulic actuator and a manual selector valve, but the yellow electric pump, the electric selector valve, the hand pump and the double check valve are common to both cargo doors.

NOTE: The double check valve depressurizes the cargo door system after operation and prevents loss of reservoir pressure and hydraulic fluid after a leak.
When the normal cargo door operating system is in use the yellow hydraulic flight control system operation is inhibited through the Hydraulic System Monitoring Unit (HSMU).

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



GENERAL

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

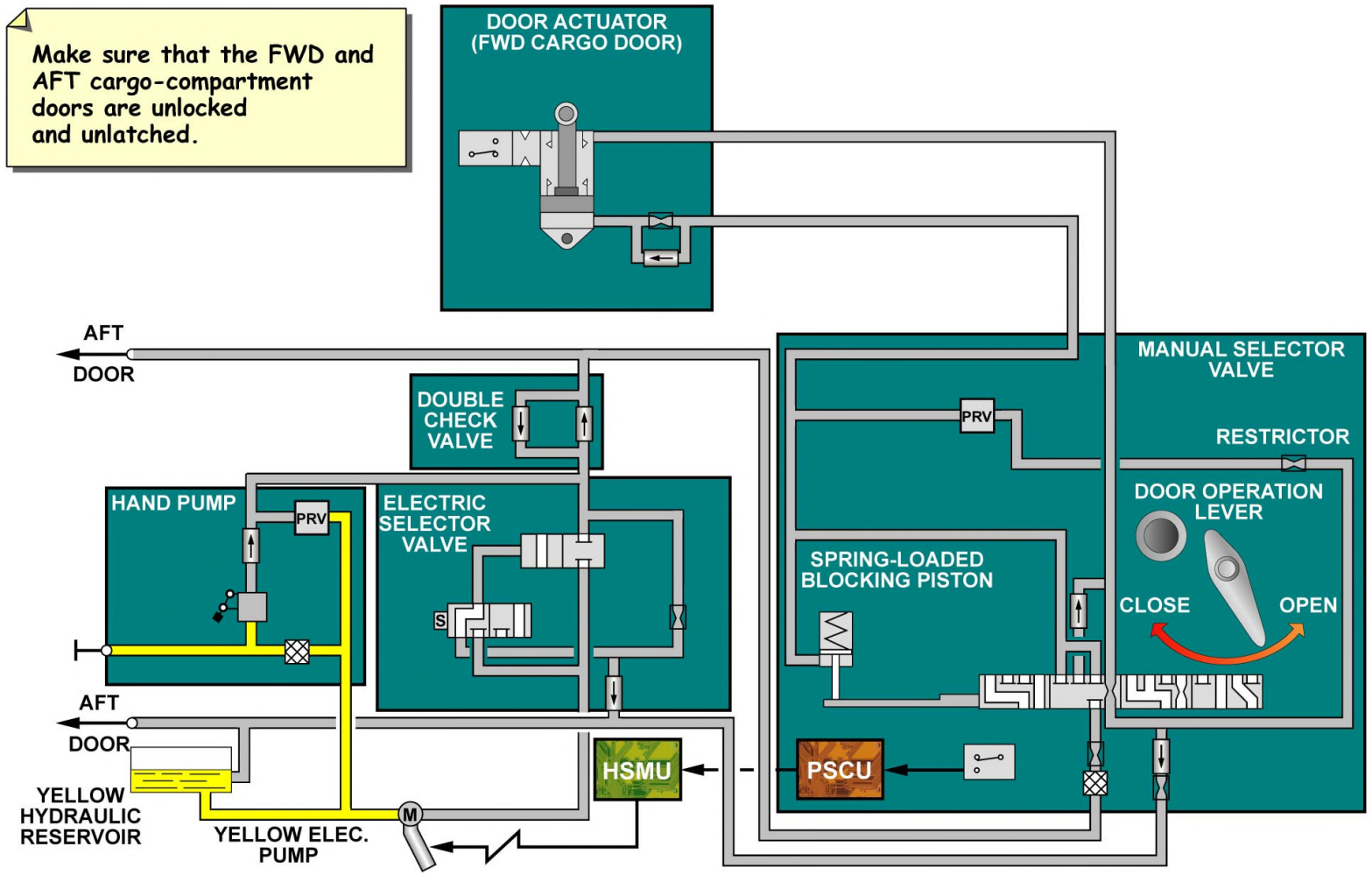
NORMAL OPENING

PRECAUTIONS

Before opening a cargo door, it is necessary to make sure that the appropriate cargo-compartment door is unlocked and unlatched.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL OPENING - PRECAUTIONS

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

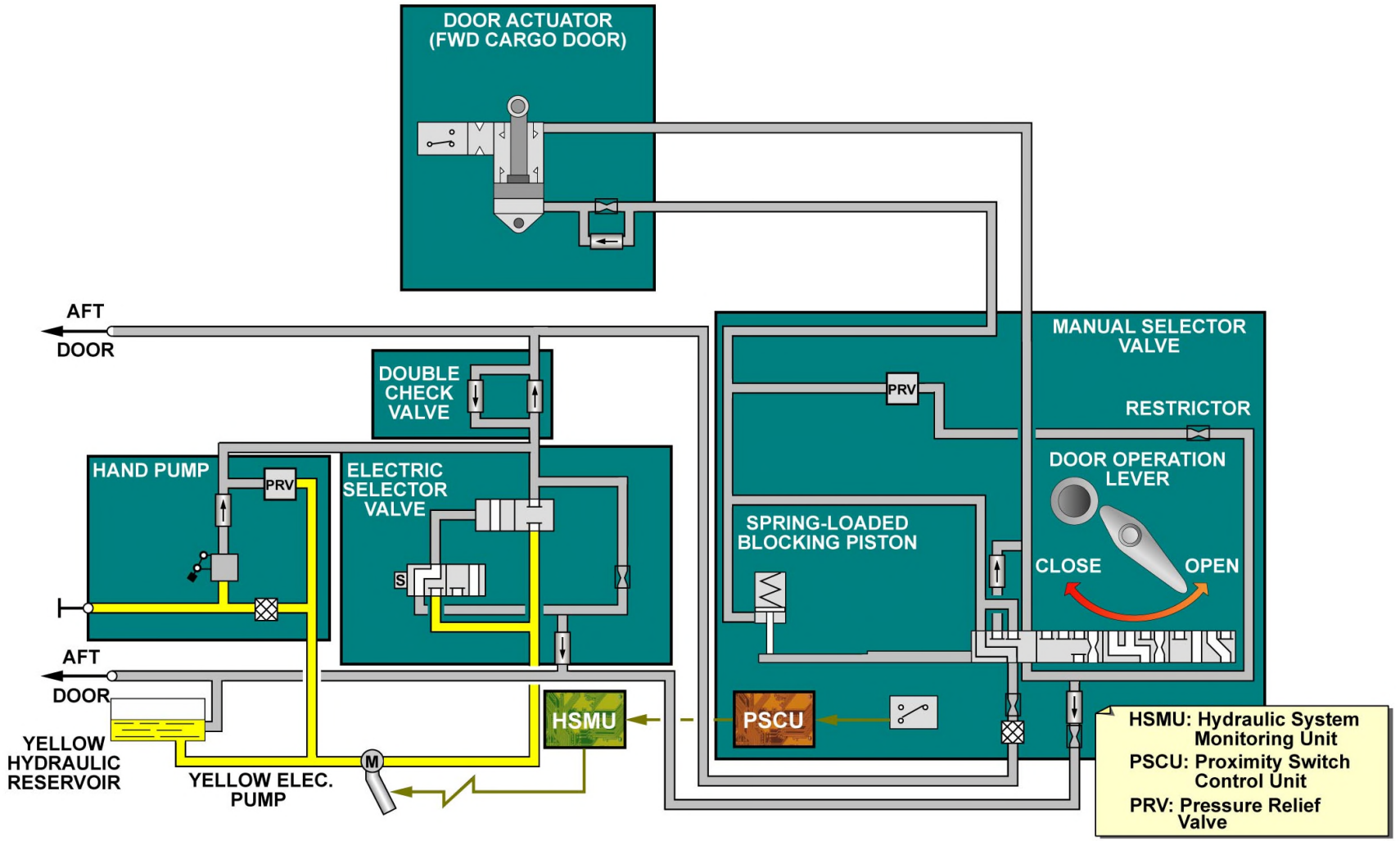
NORMAL OPENING (continued)

HYDRAULIC SYSTEM ACTIVATION

To operate the door hydraulic system, set the door operation lever on the control panel to the OPEN position and hold it. This moves the manual selector valve to the extension position. Then, a signal is sent through the Proximity Switch Control Unit (PSCU) to the HSMU which starts the yellow electric pump to supply the hydraulic fluid.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL OPENING - HYDRAULIC SYSTEM ACTIVATION

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

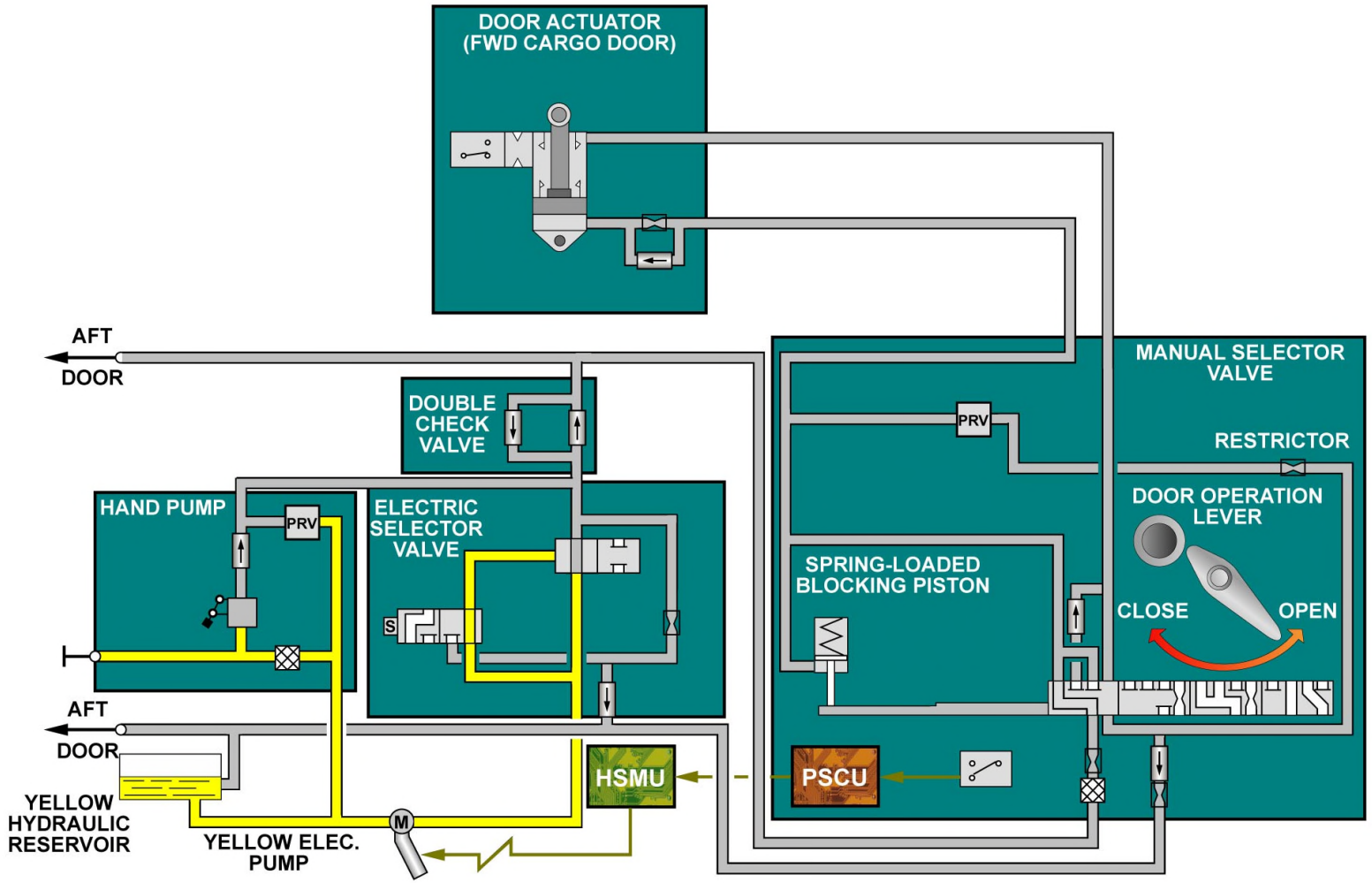
NORMAL OPENING (continued)

ELECTRIC SELECTOR VALVE

The electric selector valve is energized open and releases the pressure to the manual selector valve.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL OPENING - ELECTRIC SELECTOR VALVE

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

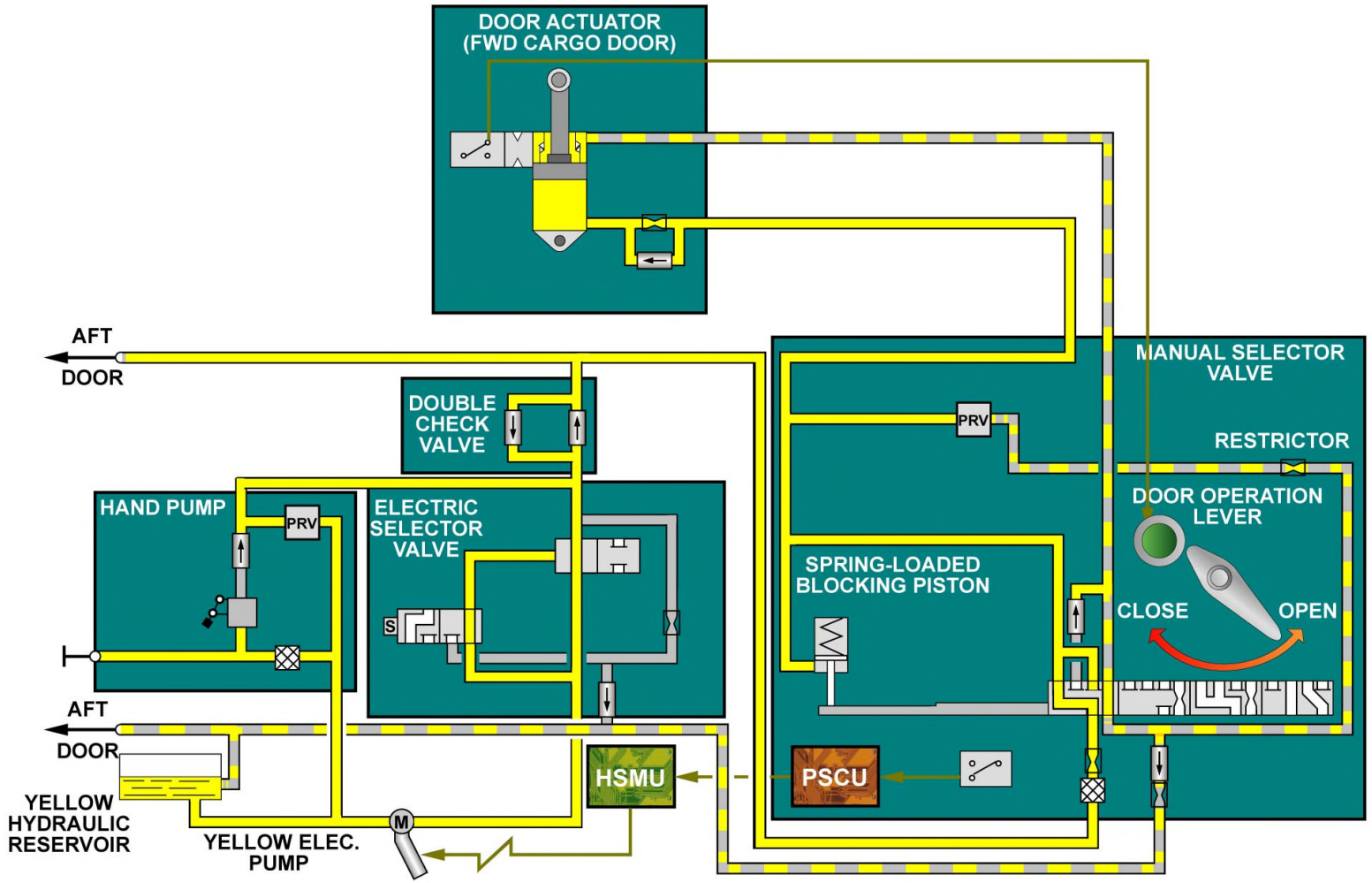
NORMAL OPENING (continued)

EXTENDED POSITION

The door actuator extends and opens the cargo compartment door outwards. When the cargo compartment door is fully opened, the green indicator light on the control panel comes on to indicate that the door actuator is mechanically locked in its extended position.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL OPENING - EXTENDED POSITION

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

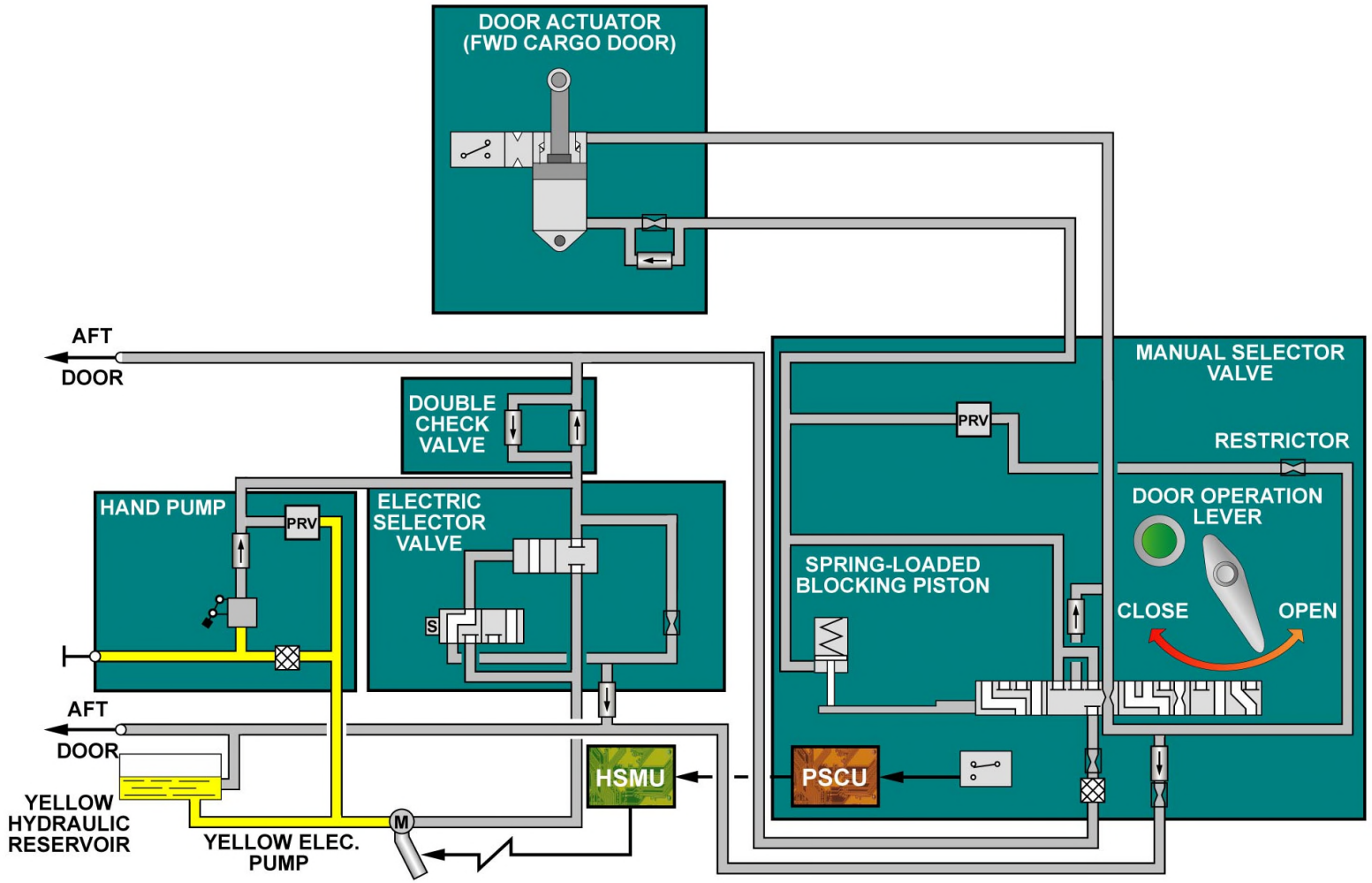
NORMAL CLOSING

PRECAUTIONS

Before operating the door hydraulic system make sure that the door sill latches are lifted. The door sill latches operate micro switches which either enable cargo door operation when in raised position, or cargo loading system operation when lowered.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL CLOSING - PRECAUTIONS

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

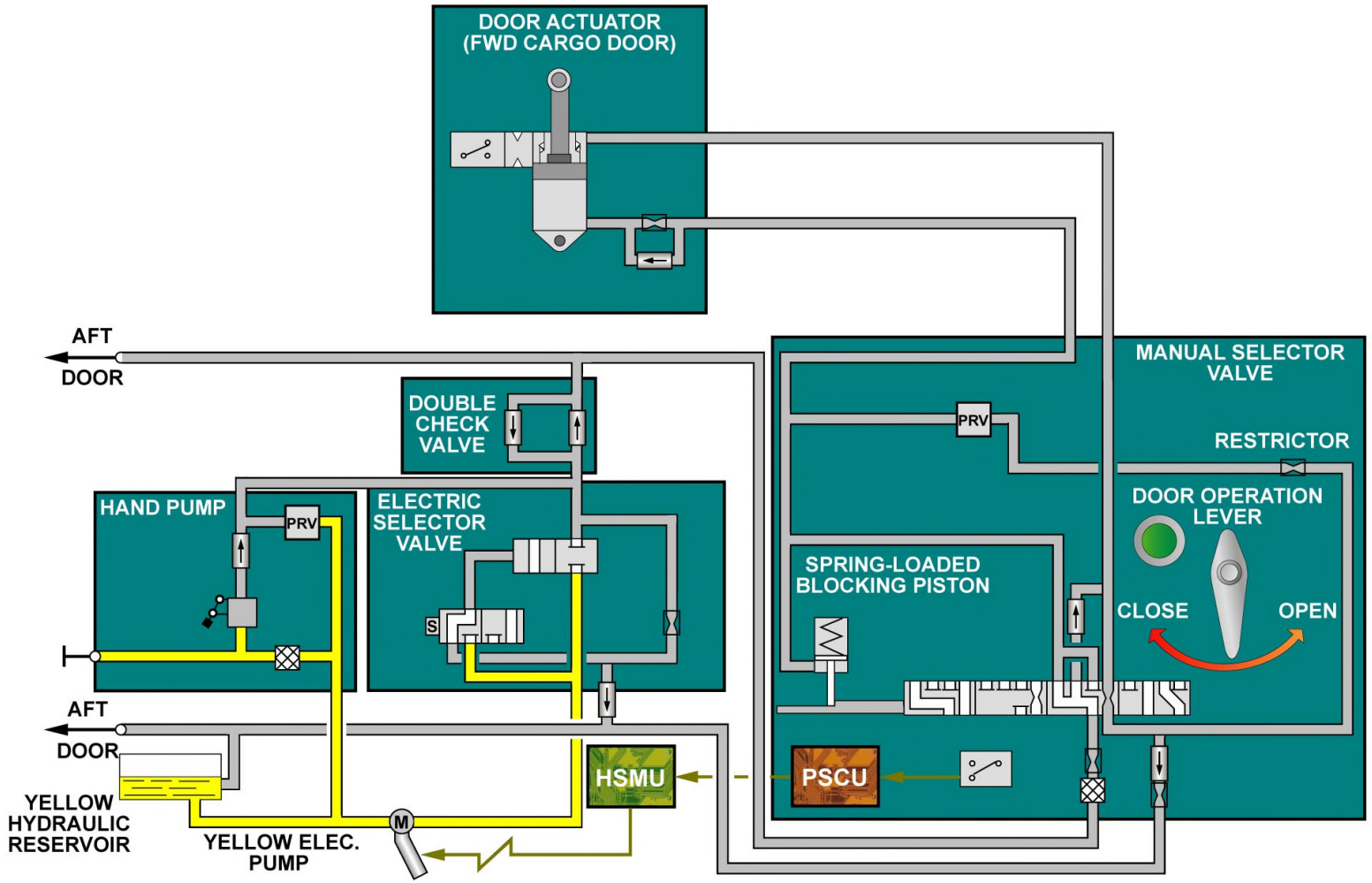
NORMAL CLOSING (continued)

HYDRAULIC SYSTEM ACTIVATION

The door operation lever is turned towards the CLOSE position and it stops in the intermediate position then the pump starts.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL CLOSING - HYDRAULIC SYSTEM ACTIVATION

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

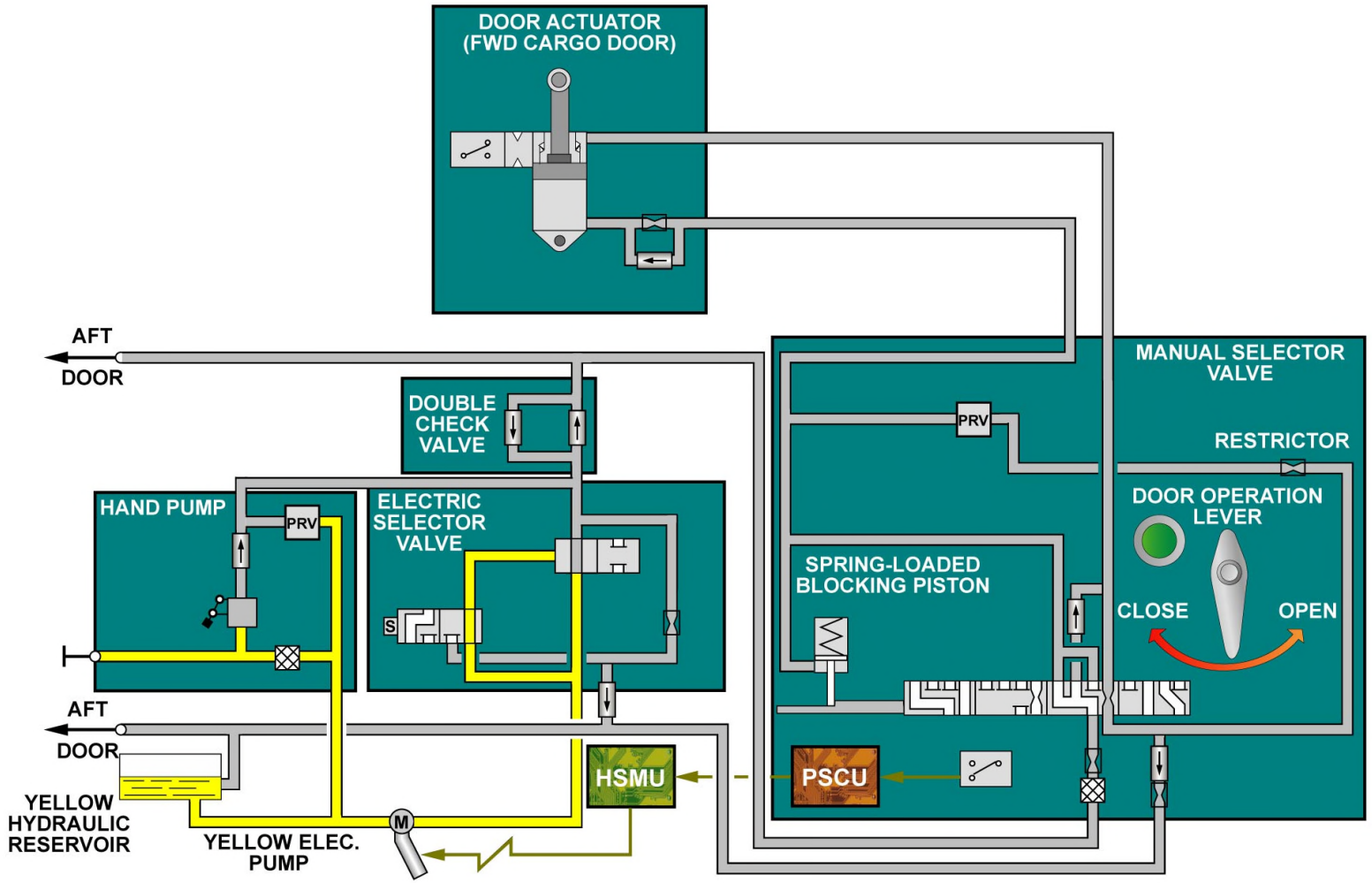
NORMAL CLOSING (continued)

ELECTRIC SELECTOR VALVE

The electric selector valve is energized open to release the pressure to the manual selector valve.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL CLOSING - ELECTRIC SELECTOR VALVE

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

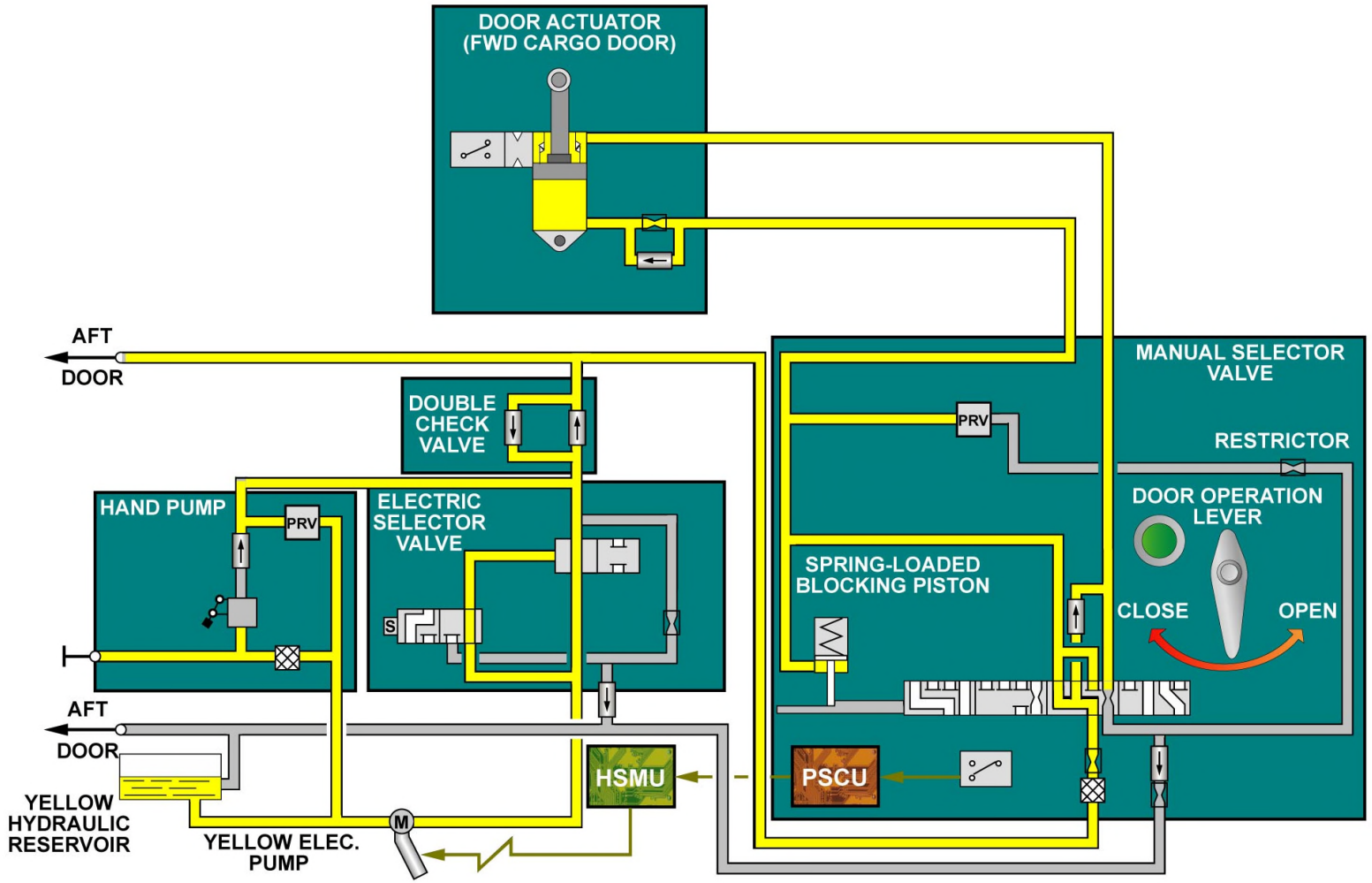
NORMAL CLOSING (continued)

INTERMEDIATE POSITION

The intermediate position is a safety position. The door actuator is first pressurized on both sides to prevent a sudden movement of the door when the actuator mechanical lock is released, what could cause a damage of the lock.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL CLOSING - INTERMEDIATE POSITION

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

NORMAL CLOSING (continued)

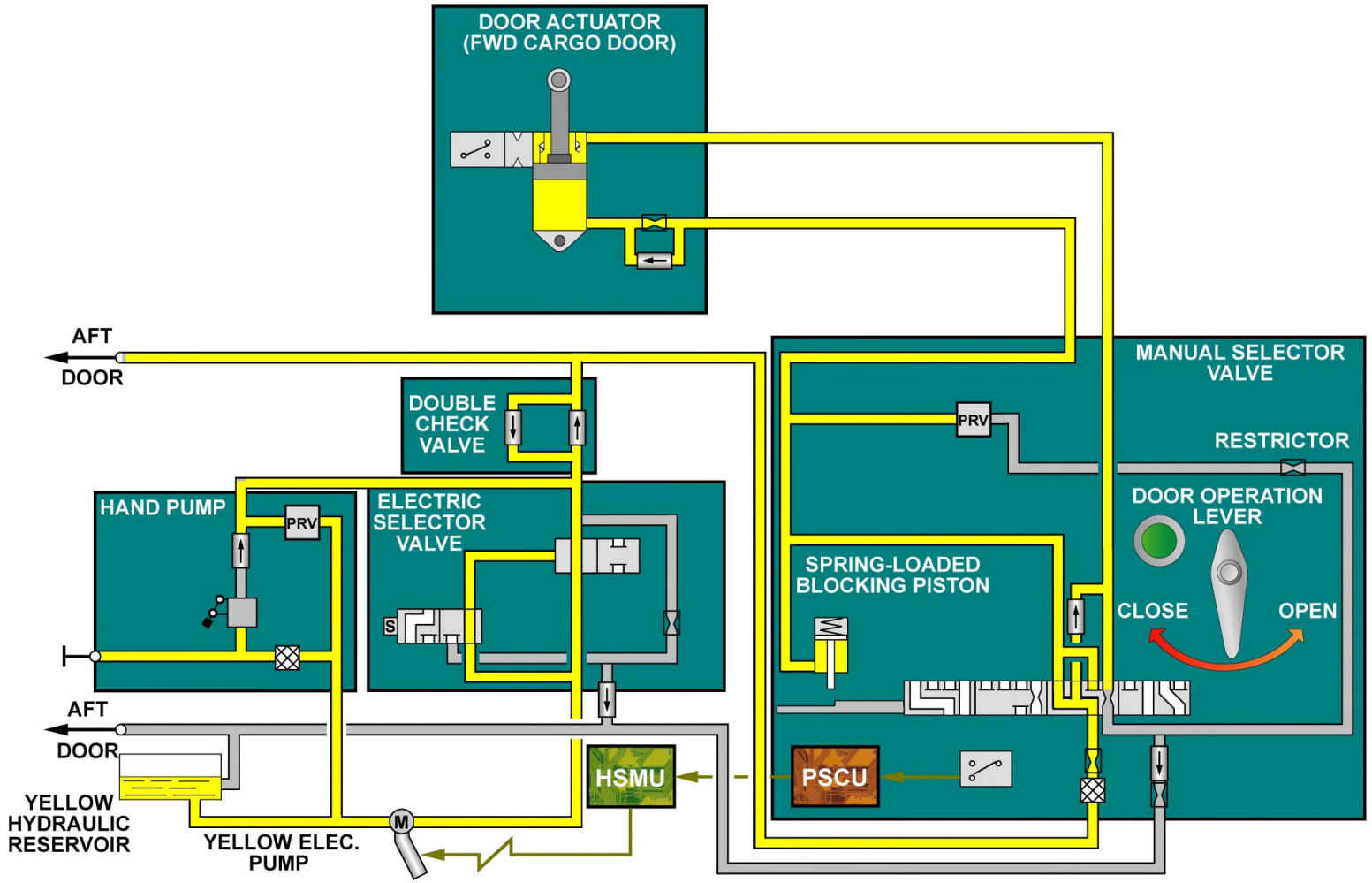
SAFETY PRESSURE

When the pressure is then sufficient the blocking piston retracts and the manual selector valve can be moved further to the fully close position.

NOTE: The manual selector valve remains in the intermediate position until the pressure reaches 20 bars (290 psi) in the blocking piston.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL CLOSING - SAFETY PRESSURE

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

NORMAL CLOSING (continued)

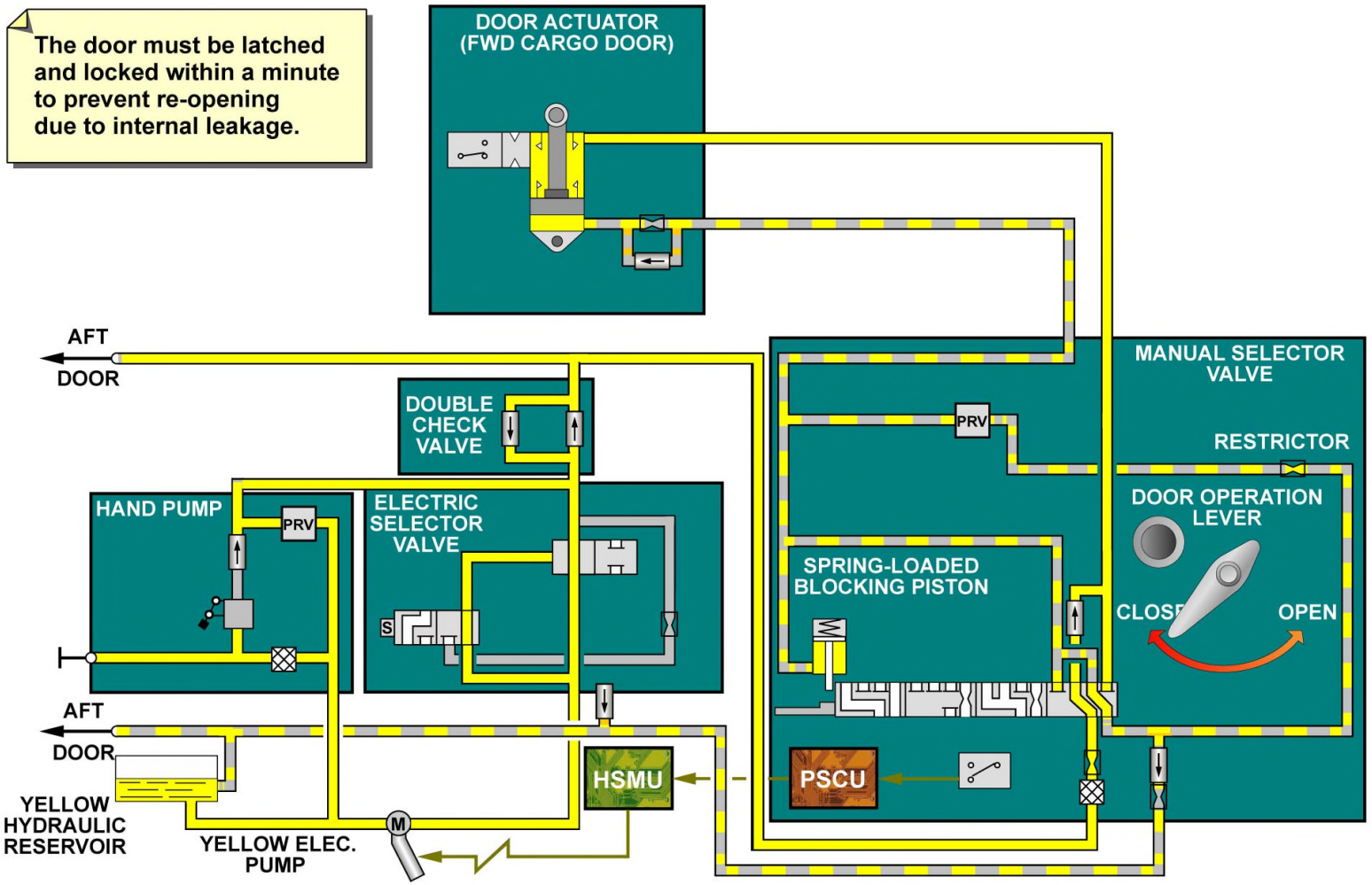
CLOSED POSITION

The manual selector valve can move to supply the door actuator for closing.

NOTE: The door must be latched and locked within a minute to prevent re-opening due to internal leakage.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



NORMAL CLOSING - CLOSED POSITION

G7508471 - G3NT1T0 - FM52D6F52D70202

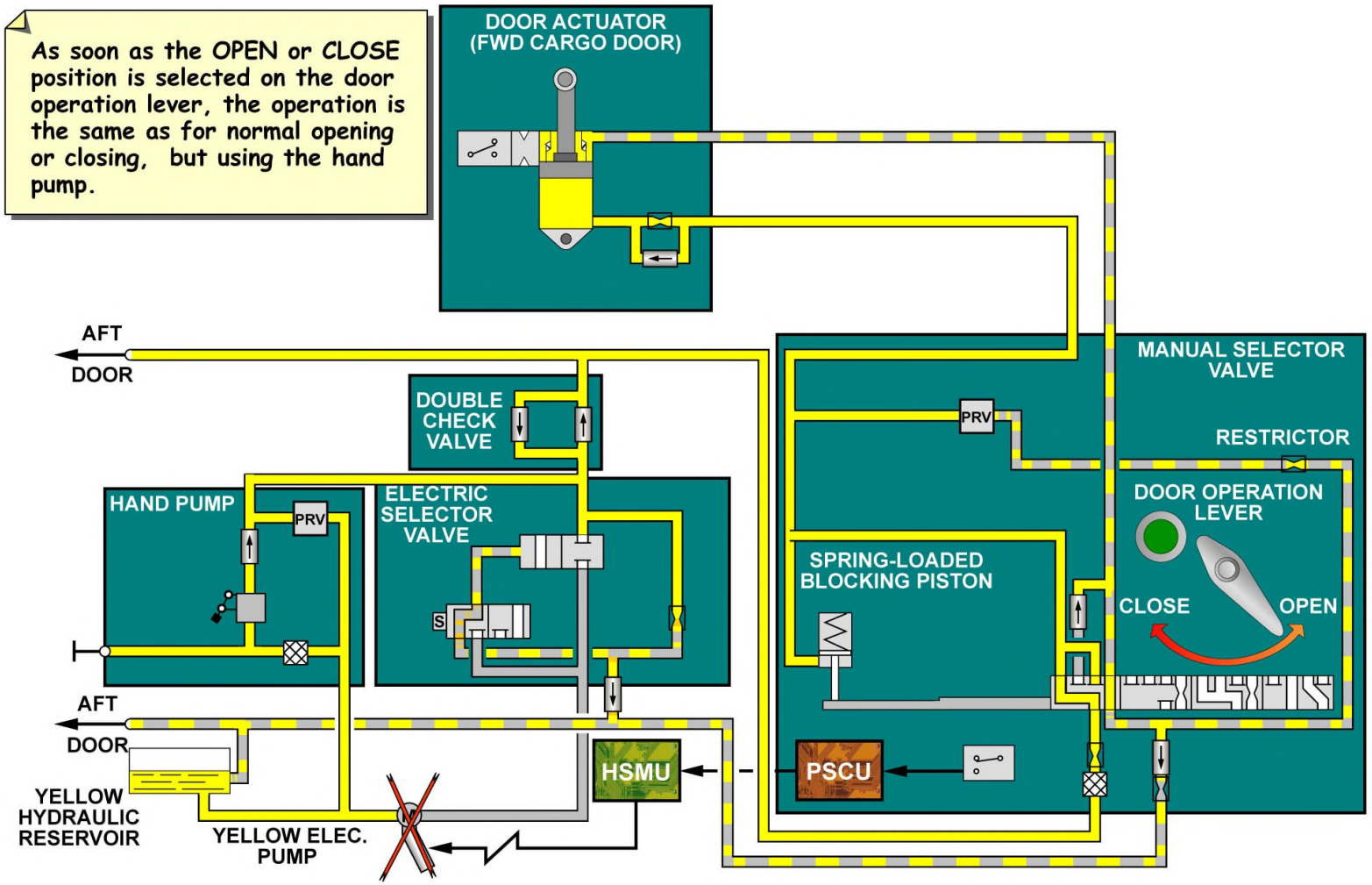
CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

MANUAL OPERATION

With no electrical power available on the aircraft the yellow electric pump is not available, and the manual selector does not energize the electric selector valve. In this case the hand pump on the yellow hydraulic panel must be used to operate the door hydraulic system manually. A second person is needed to operate the hand pump. The operating handle for the hand pump has to be taken from the green hydraulic system service panel. The further operation for opening and closing is identical with the door normal operation.

G7508471 - G3NT1T0 - FM52D6F52D70202

CARGO-COMPARTMENT DOOR HYDRAULIC SYSTEM



MANUAL OPERATION

G7508471 - G3NT1T0 - FM52D6F52D70202

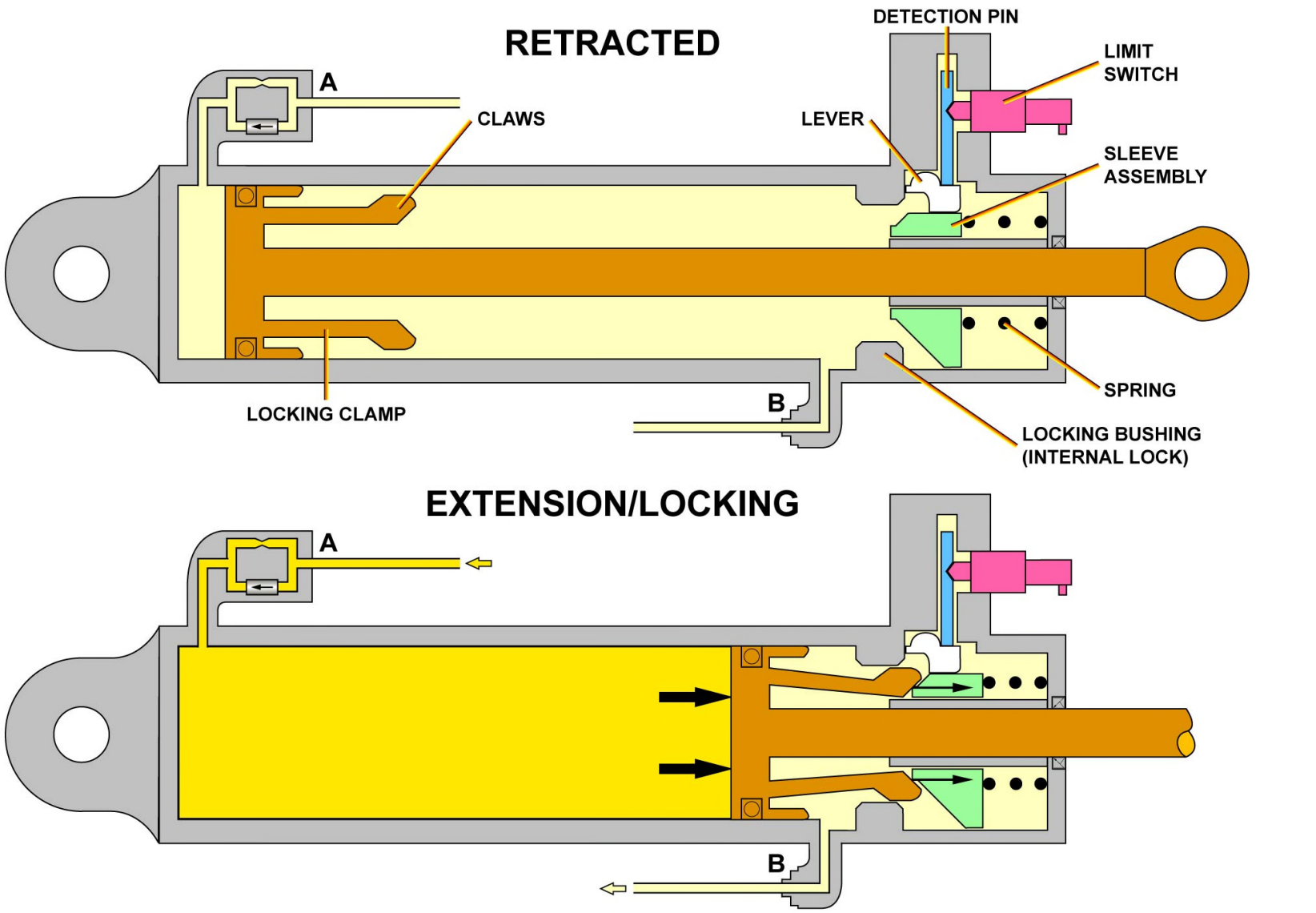
CARGO DOORS FWD AND AFT HYDRAULIC SYSTEM D/O (3)

ACTUATOR OPERATION

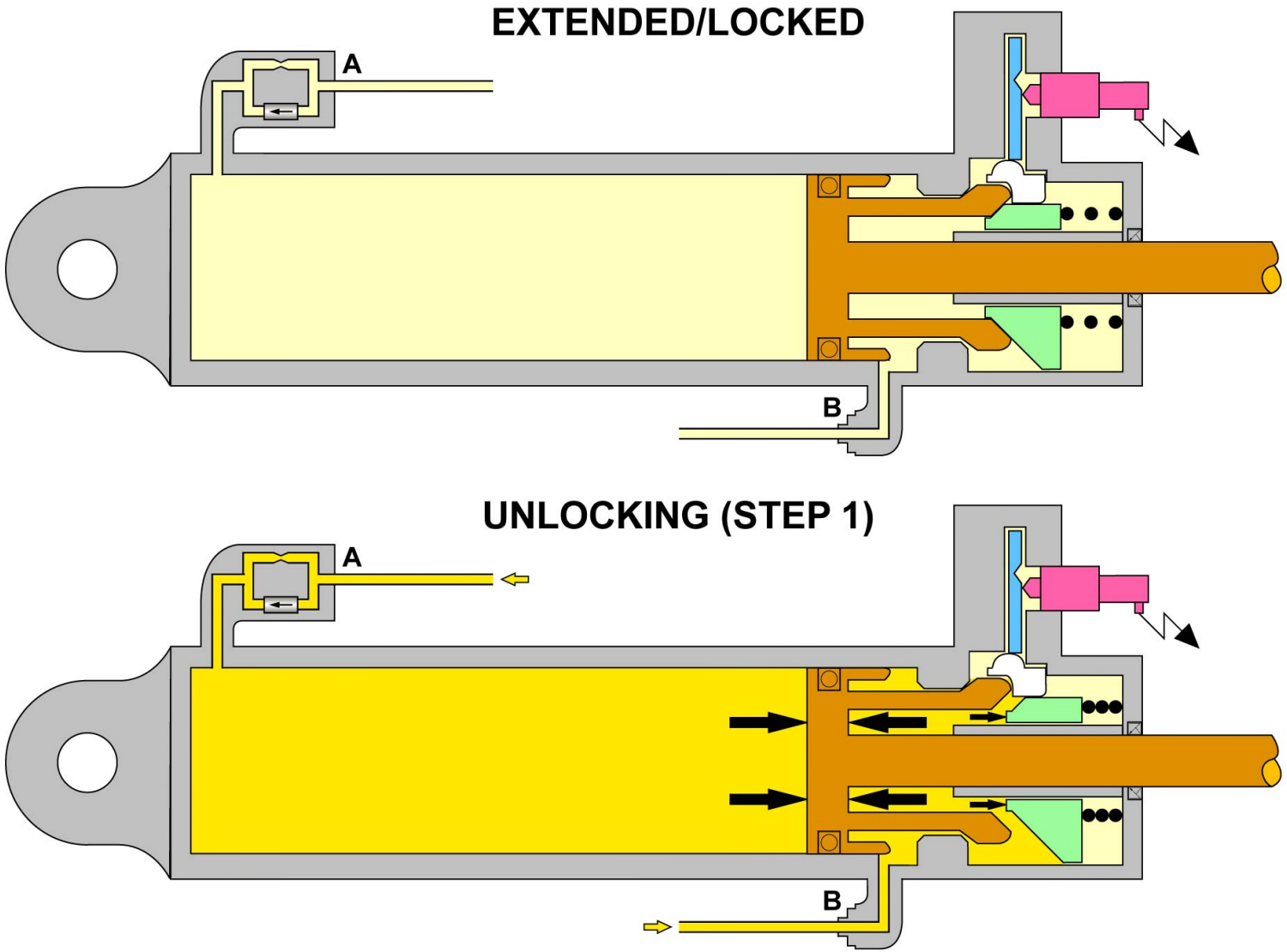
GENERAL:
The cargo door actuator is a double-acting hydraulic actuator, which operates the cargo door for opening and closing.
Main features of this actuator are:
- An internal mechanical locking system to safely lock the cargo door in full open position.
- A locking detection system to indicate door full opening and locking on the control panel.
- A restrictor and a check valve at port A to provide similar operation speed during closing and opening despite cargo door weight.

ACTUATOR RETRACTED:
Actuator is fully retracted; cargo door is closed; actuator ports A and B are depressurized.
ACTUATOR EXTENSION/LOCKING:
Pressurizing port A of the actuator causes extension of the actuator and cargo door opening. When the locking clamp reaches the locking bushing, the locking clamp claws go underneath the lock of the locking bushing by flexibility.
ACTUATOR EXTENDED/LOCKED:
Further extension of the piston rod causes the locking clamp claws to push back the sleeve assembly against the spring. At the end of the piston rod travel the claws move apart releasing the sleeve assembly; the compressed spring pushes the sleeve assembly underneath the claws; the actuator is mechanically locked. The locking detection system is activated; the limit switch sends a signal to the control panel.
ACTUATOR UNLOCKING (STEP 1):
Ports A and B are pressurized simultaneously for a short time. The pressure applied from port B to the surface area of the sleeve assembly pushes the sleeve assembly against the spring; the actuator is unlocked and starts to slowly retract under the weight of the cargo door.
ACTUATOR UNLOCKING (STEP 2):
Port B remains pressurized while port A is depressurized. Actuator retracts; the locking clamp claws go underneath the stops of the locking bushing by flexibility. Door is closing. A restrictor installed at port A limits the operation speed to a set value.

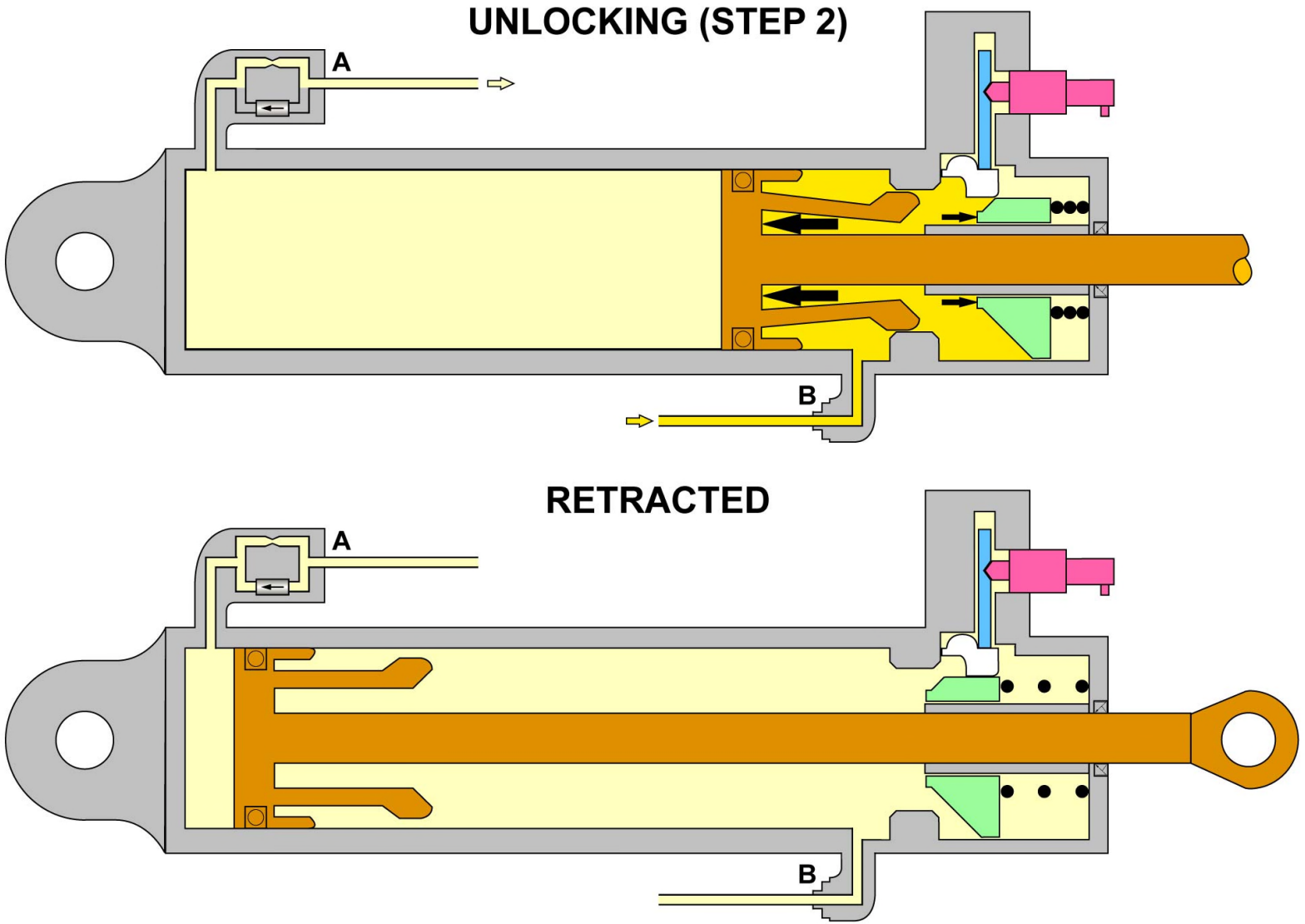
G7508471 - G3NT1T0 - FM52D6F52D70202



ACTUATOR OPERATION



ACTUATOR OPERATION



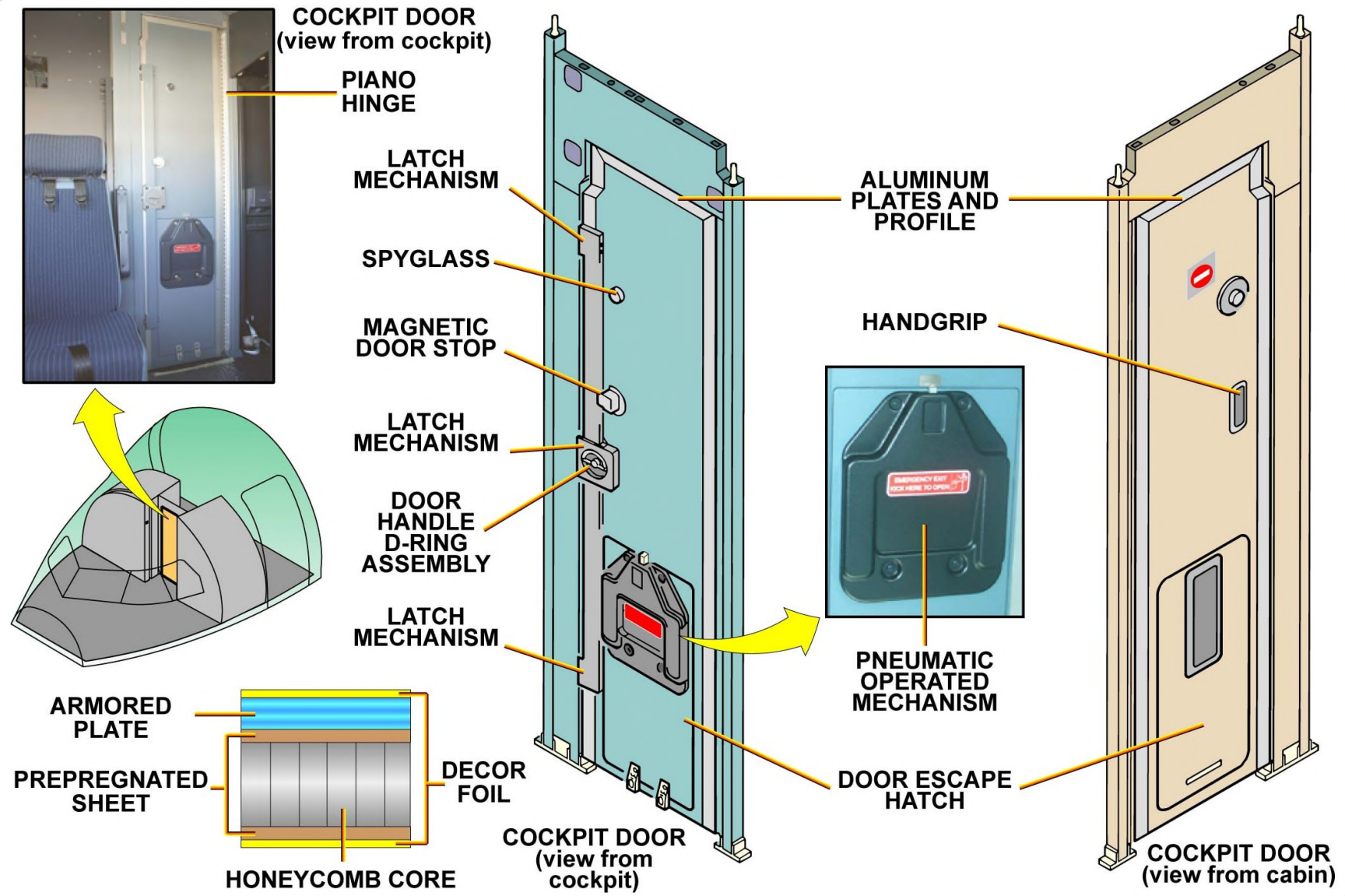
ACTUATOR OPERATION

COCKPIT DOORS D/O (3)

DOOR STRUCTURE AND ELEMENTS DESCRIPTION

The cockpit door structure is a honeycomb core bonded between two prepregnated sheets. Aluminum plates and aluminum profiles reinforce the edges of the door. An armored plate has the same lining as the passenger cabin and is installed to prevent damage. The door has a cut-out section in the door structure for the door escape hatch. In case of emergency the cockpit crew can leave the cockpit through this door escape hatch. The door escape hatch structure is the same as the door. The door escape hatch is equipped with a pneumatically operated mechanism that opens the hatch if a rapid decompression occurs in the cabin.
A piano hinge connects the cockpit door to the reinforced door frame structure. A three-latch mechanism is installed on the inner side of the cockpit door. The latches are connected together by adjustable tie-rods. The center latch mechanism has a spring-loaded D-ring assembly, which extends or retracts its internal latch tenon. A door handle, a spyglass and a magnetic door stop are fitted on the cockpit side door. A handgrip is located on the cabin side door.

G7508471 - G3NT1T0 - FM52DC000000002



DOOR STRUCTURE AND ELEMENTS DESCRIPTION

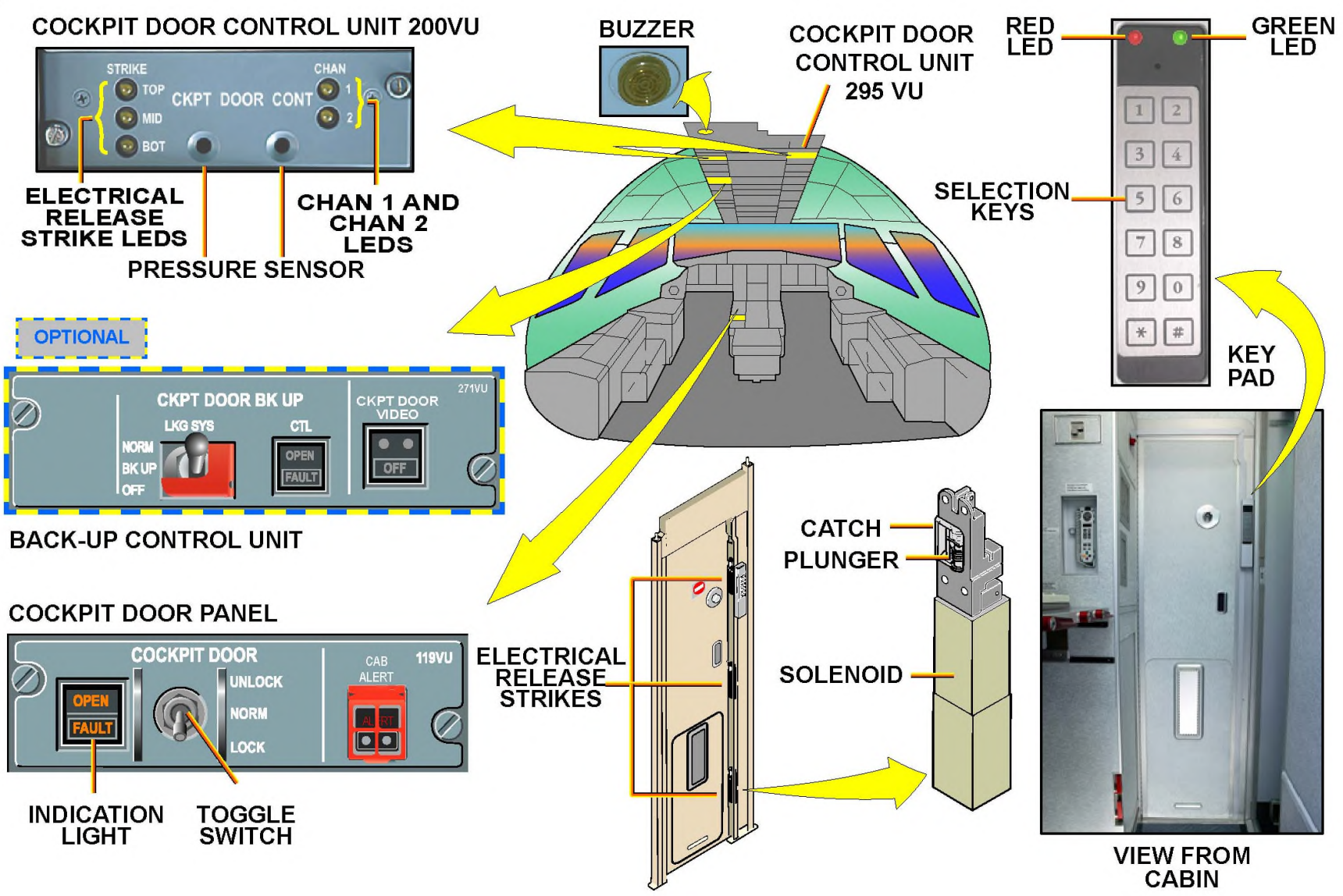
G7508471 - G3NT1T0 - FM52DC00000002

COCKPIT DOORS D/O (3)

COCKPIT DOOR LOCKING SYSTEM (CDLS)

For cockpit security reason, the cockpit door is equipped with an electro-mechanically-operated release system: the Cockpit Door Locking System (CDLS). A keypad is installed on the RH cockpit door frame. It has a red LED, a green LED and twelve selection keys with numbers from 0 to 9, "*" and "#" symbols. An electrical buzzer is installed on the overhead panel. A signal from the control unit operates the buzzer.
An additional and optional switch is installed on the cockpit door panel and near each cabin attendant station in case of hijacking in the cabin. The cabin crew activates the alert by pressing one of the pushbutton located in each attendant 's area and then the buzzer sounds in the cockpit. The CAB ALERT pushbutton on the cockpit door panel comes on. When the cockpit crew pushes the alert pushbutton, the buzzer stops and the red alert light goes off.
A toggle switch is installed on the cockpit door panel, on the center pedestal. It is a three-position switch (UNLOCK, NORM and LOCK) spring-loaded to the neutral NORM position. To select the UNLOCK position, the switch must be pulled and maintained in the UNLOCK position until the door opens: it prevents an unwanted operation of the toggle switch. On the neutral position, the cockpit door is automatically locked. OPEN and FAULT amber indications are displayed on the cockpit door panel. The OPEN indication comes on amber when the cockpit door is open. The FAULT indication also comes on amber when there is a malfunction in the CDLS.
Three electrical release strikes are installed in the RH cockpit door frame. Each one is fitted with a solenoid and a microswitch for monitoring. When the solenoid is energized, the plunger extends and the catch is blocked. When the solenoid is de-energized, the plunger retracts and the catch is free. The center electrical release strike has an additional microswitch, which monitors the condition of the center latch mechanism. When its tenon does not engage in the catch, this causes the OPEN indication light to come on.
The control unit installed on the overhead panel manages the fault indications, time delays and door access through the control of the CDLS. To ensure functionality of the cockpit door release system under Minimum Equipment List (MEL) conditions, a second control unit is installed on the overhead panel, it is a back-up system. They have two internal pressure sensors, which de-energize the solenoids and unlock the door if a rapid decompression occurs in the cockpit. Note that only one sensor is necessary to activate the system. The microprocessor receives signals from the toggle switch and the keypad. It sends a signal to operate the buzzer, the indication light, the green LED or red LED of the keypad and the solenoids of the electrical release strikes.
If a pressure sensor fault occurs, the related CHAN 1 or CHAN 2 LED and the amber FAULT light come on. If a fault occurs in the electrical release strikes, detected by the corresponding microswitch, the related strike LED and the amber FAULT light come on.
The back-up system will be activated via an override switch named LKG SYS, under one of the following conditions:
- fault illuminated on the basic system due to CHAN 1 and CHAN 2 fault,
- basic system malfunction.

G7508471 - G3NT1T0 - FM52DC000000002



COCKPIT DOOR LOCKING SYSTEM (CDLS)

G7508471 - G3NT1T0 - FM52DC00000002

COCKPIT DOORS D/O (3)

DOOR OPENING MODES

If the CDLS is not energized, the cockpit door is unlocked, but remains closed. It can be opened either from the cockpit or from the cabin.
If the CDLS is energized, the cockpit door is locked and can be opened from the cockpit only.

CABIN TO COCKPIT - NORMAL OPERATION

Press "#" on the keypad. The buzzer rings to inform the flight crew that an access into the cockpit is requested. If the flight crew sets the toggle switch to the UNLOCK position:
- the control unit de-energizes the solenoids of the release strikes. The plungers retract and set the catches free,
- the control unit triggers the green LED on the keypad to show that the cockpit door is unlocked and access is available,
- the buzzer stops and the amber OPEN indication light on the cockpit door panel comes on.

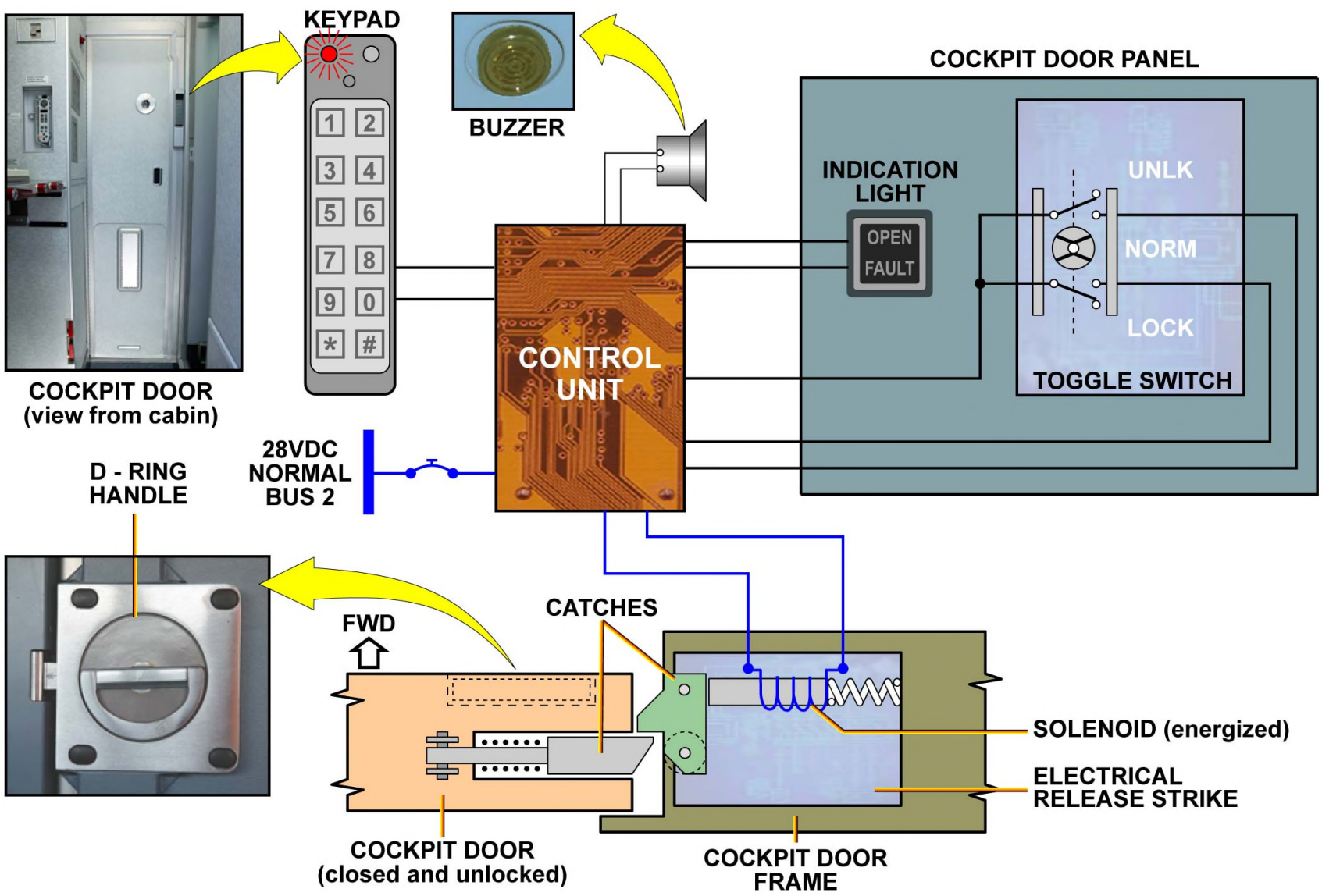
The cockpit door can be opened and kept fully open with a magnetic stop. The OPEN indication light remains illuminated. If the flight crew sets the toggle switch to the LOCK position:
- the control unit keeps the solenoids of the release strikes energized. The plungers remain extended, so they block the catches.
- the control unit triggers the red LED on the keypad, to show that the cockpit door is locked and access to the cockpit is prohibited,
- the buzzer stops.

In this case, the operation of the keypad and the buzzer is prevented during a limited time (adjustable between 5 and 15 minutes). The flight crew can cancel this function if they set the toggle switch from the LOCK to the UNLOCK position.

COCKPIT TO CABIN - NORMAL OPERATION

Lift and turn the D-ring of the center latch mechanism to 90 degree; so its internal spring-loaded tenons retract. The tenons are disengaged from the catches of the electrical release strikes and the cockpit door can be opened.

G7508471 - G3NT1T0 - FM52DC00000002



DOOR OPENING MODES - CABIN TO COCKPIT - NORMAL OPERATION & COCKPIT TO CABIN - NORMAL OPERATION

G7508471 - G3NT1T0 - FM52DC00000002

COCKPIT DOORS D/O (3)

DOOR OPENING MODES (continued)

CABIN TO COCKPIT - EMERGENCY OPERATION

Enter the four-digit emergency code and press "#" on the keypad. The buzzer rings continuously. The green LED flashes on the keypad. The OPEN indication light flashes on the cockpit panel. If the flight crew does not operate the toggle switch in a limited time (between 15 seconds and 2 minutes):
- the control unit de-energizes the solenoids of the release strikes. Then the plungers retract and set the catches free for 5 seconds,
- the control unit triggers the green LED for 5 seconds on the keypad, to show that the cockpit door is unlocked and the access is possible,
- the OPEN indication light comes on for 5 seconds,
- the buzzer stops.

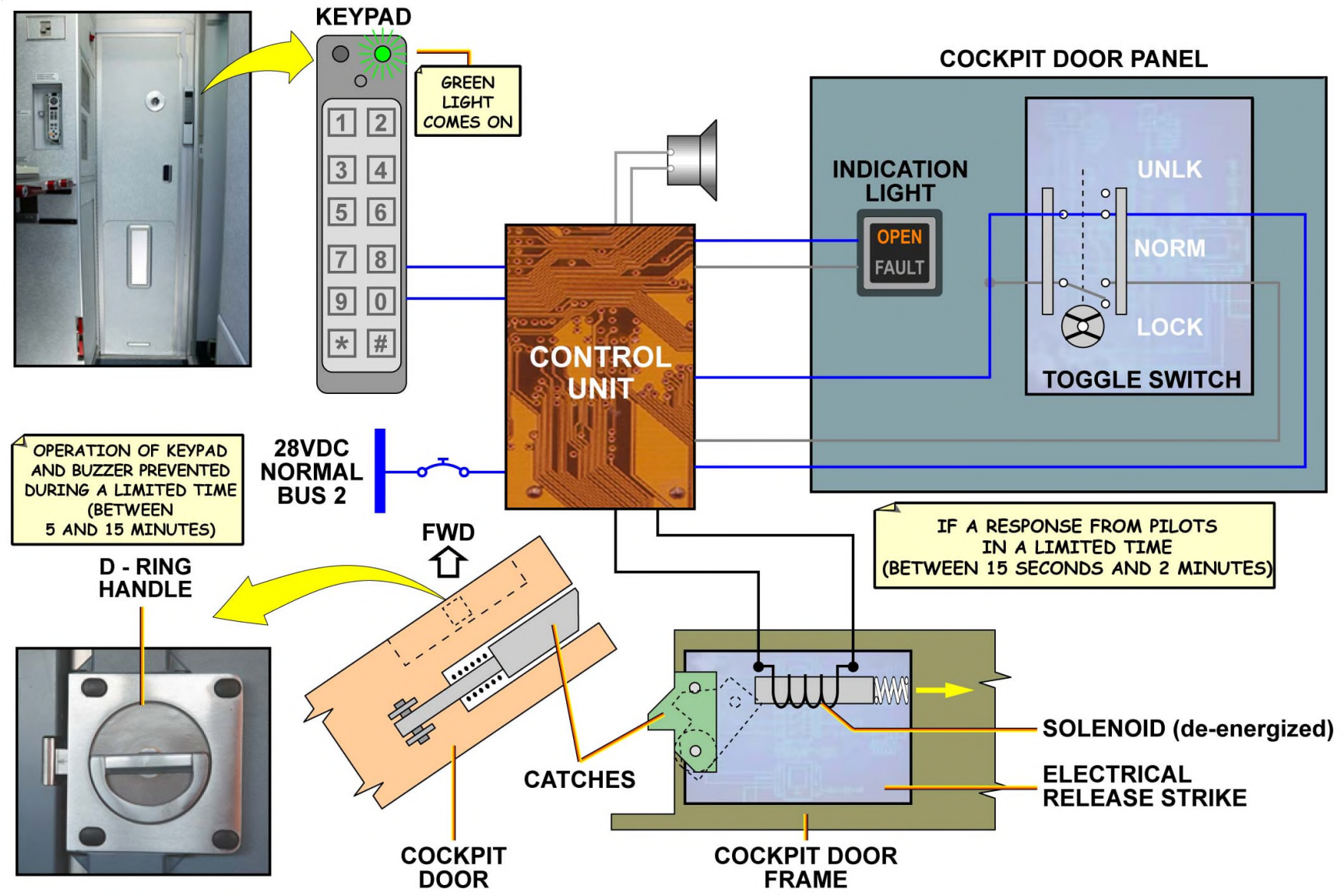
The cockpit door can be opened and kept fully open with a magnetic stop. The OPEN indication light remains on. Otherwise following the cabin crew request to enter the cockpit, if the flight crew sets the toggle switch to the UNLOCK position in a limited time (between 15 seconds and 2 minutes):
- the control unit de-energizes the solenoids of the release strikes, the plungers retract and set the catches free,
- the control unit triggers the green LED to show that the cockpit door is unlocked and access is possible,
- the buzzer stops and the OPEN indication light on the cockpit door panel comes on.

The cockpit door can be opened and kept fully open with a magnetic stop. The OPEN indication light on the cockpit door panel remains on.

Following the cabin crew request to enter the cockpit, if the flight crew sets the toggle switch to the LOCK position in a limited time (between 15 seconds and 2 minutes):
- the control unit keeps the solenoids of the release strikes energized and the OPEN indication light stops flashing. The plungers remain extended and block the catches,
- the control unit triggers the red LED to show that the cockpit door is locked and access to the cockpit is prohibited,
- the buzzer stops.

In this case, the operation of the keypad and the buzzer is prevented during a limited time (adjustable between 5 and 15 minutes). The flight crew can cancel this function if they set the toggle switch from the LOCK to the UNLOCK position.

G7508471 - G3NT1T0 - FM52DC000000002



DOOR OPENING MODES - CABIN TO COCKPIT - EMERGENCY OPERATION

G7508471 - G3NT1T0 - FM52DC00000002

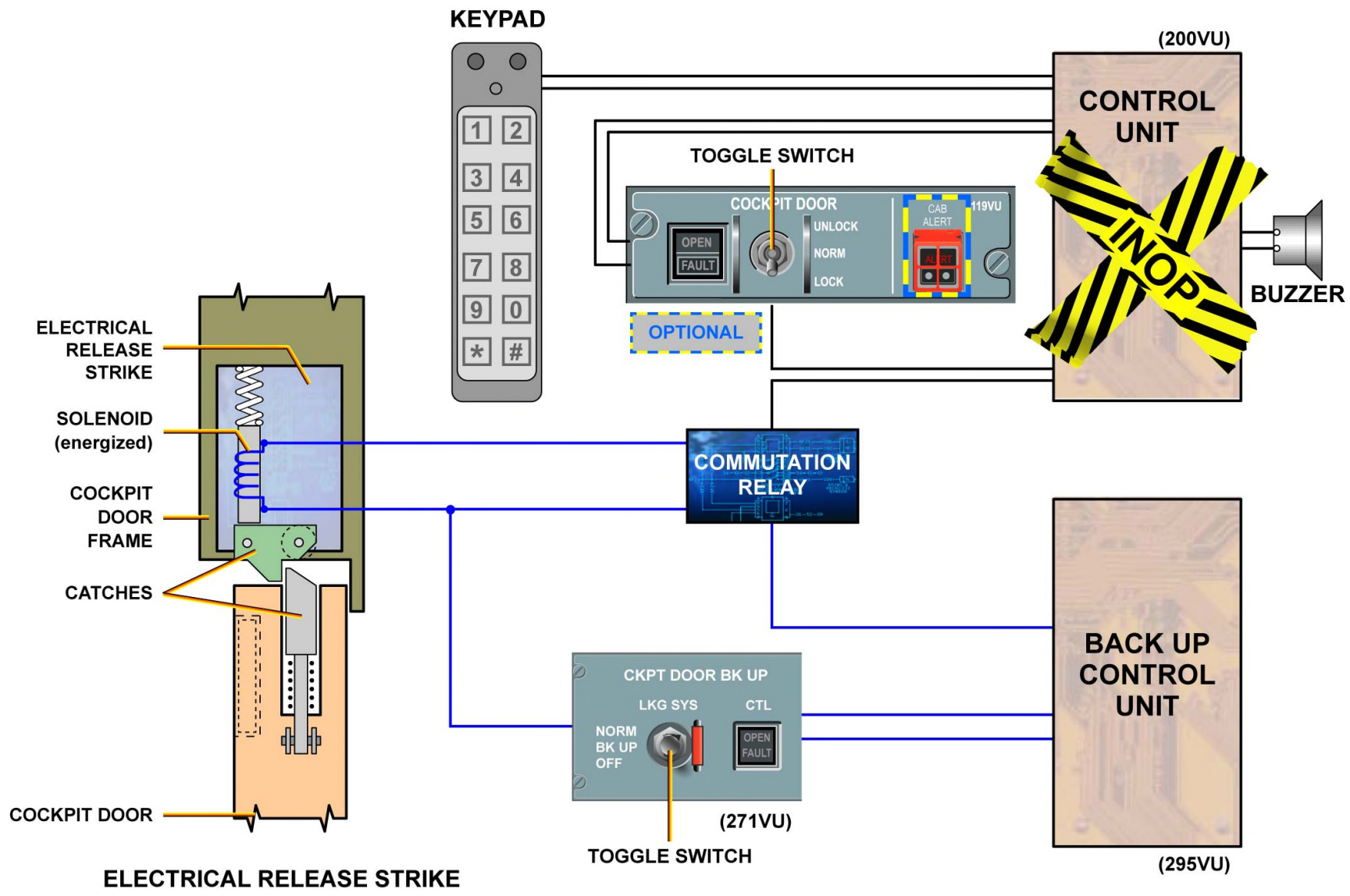
COCKPIT DOORS D/O (3)

DOOR OPENING MODES (continued)

BACK-UP SYSTEM

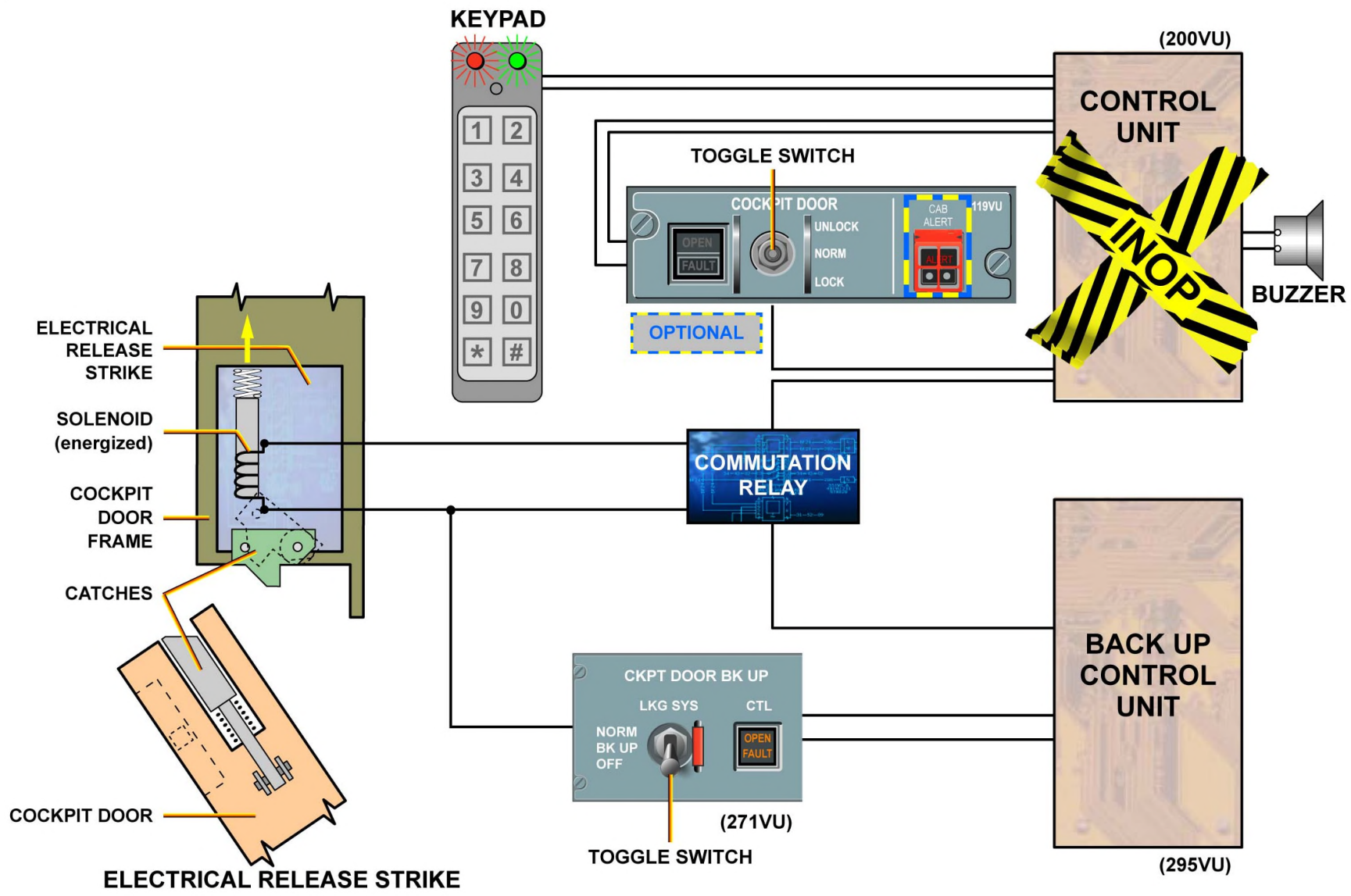
The Cockpit door locking Back-Up (CBUp) system is an optional system activated under Master Minimum Equipment List (MMEL) conditions when the normal CDLS failed. It ensures functionality of the cockpit door release system. The fault indication of one system is automatically inhibited when the other system is selected.

G7508471 - G3NT1T0 - FM52DC000000002



DOOR OPENING MODES - BACK-UP SYSTEM

G7508471 - G3NT1T0 - FM52DC00000002



DOOR OPENING MODES - BACK-UP SYSTEM

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G7508471 - G3NT1T0 - FM52DC000000002

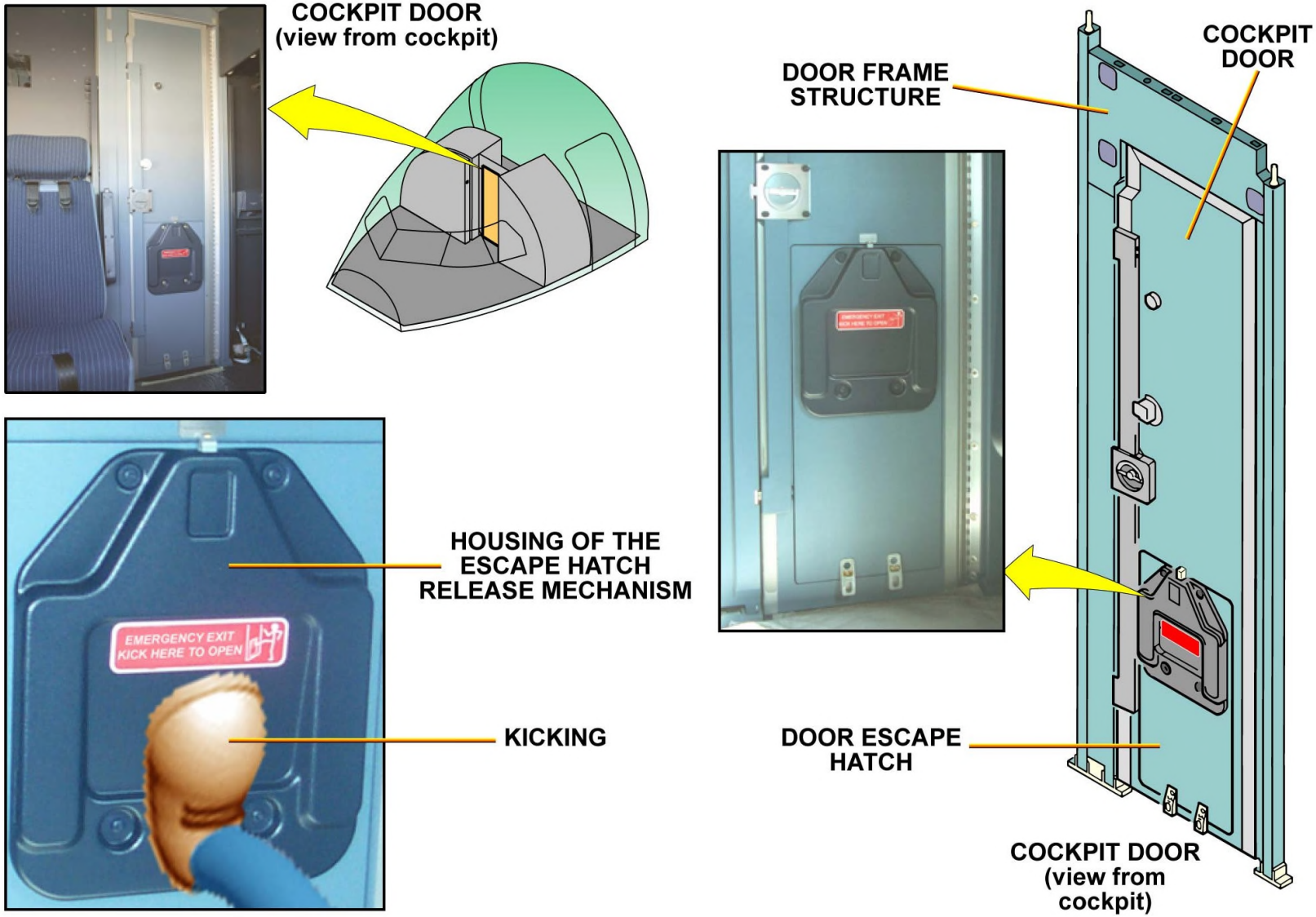
COCKPIT DOORS D/O (3)

DOOR OPENING MODES (continued)

COCKPIT TO CABIN - EMERGENCY OPERATION

If the door is jammed and cannot be normally opened, the crew can remove the door escape hatch by kicking the housing of the escape hatch release mechanism.

G7508471 - G3NT1T0 - FM52DC000000002



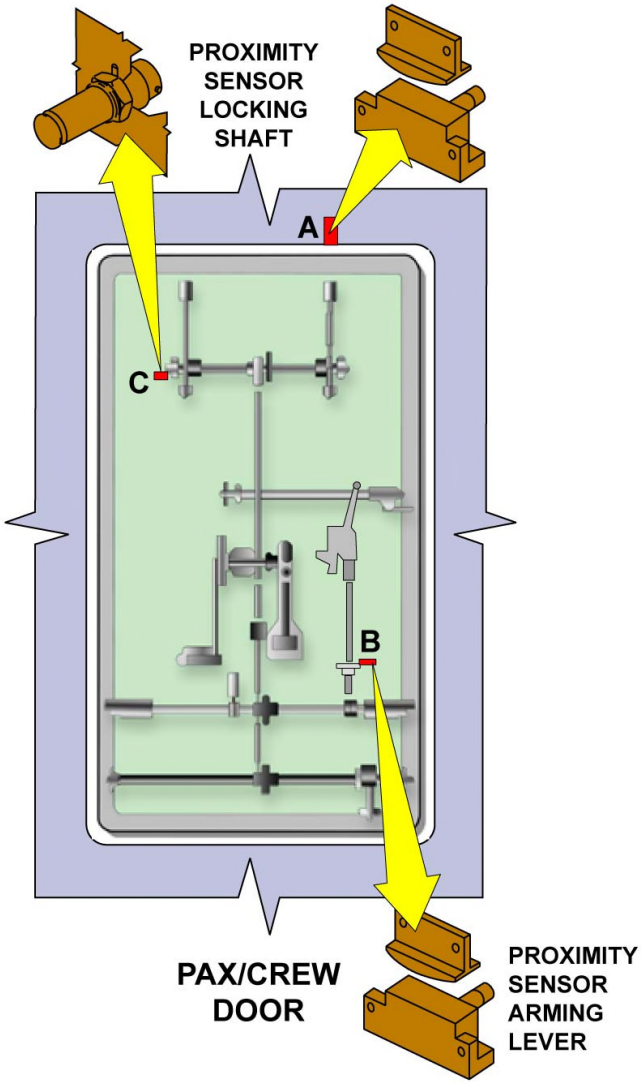
DOOR OPENING MODES - COCKPIT TO CABIN - EMERGENCY OPERATION

DOOR & SLIDE CONTROL SYSTEM PAX/CREW DOOR D/O (3)

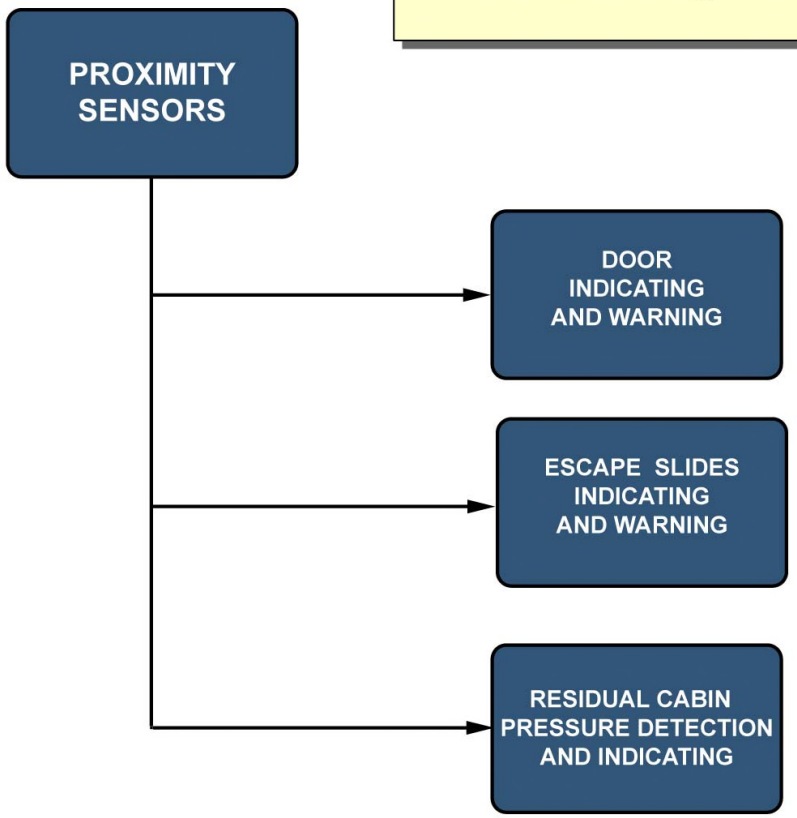
GENERAL

Each passenger/crew door has three proximity sensors, which are part of:
- the door indicating and warning system,
- the escape slide indicating and warning system,
- the residual cabin pressure detection and indicating system.

G7508471 - G3NT1T0 - FM52D9F52G20202



The door shown as example in this module is type "A" model.


PROXIMITY SENSORS
DOOR INDICATING AND WARNING
ESCAPE SLIDES INDICATING AND WARNING
RESIDUAL CABIN PRESSURE DETECTION AND INDICATING

GENERAL

DOOR & SLIDE CONTROL SYSTEM PAX/CREW DOOR D/O (3)

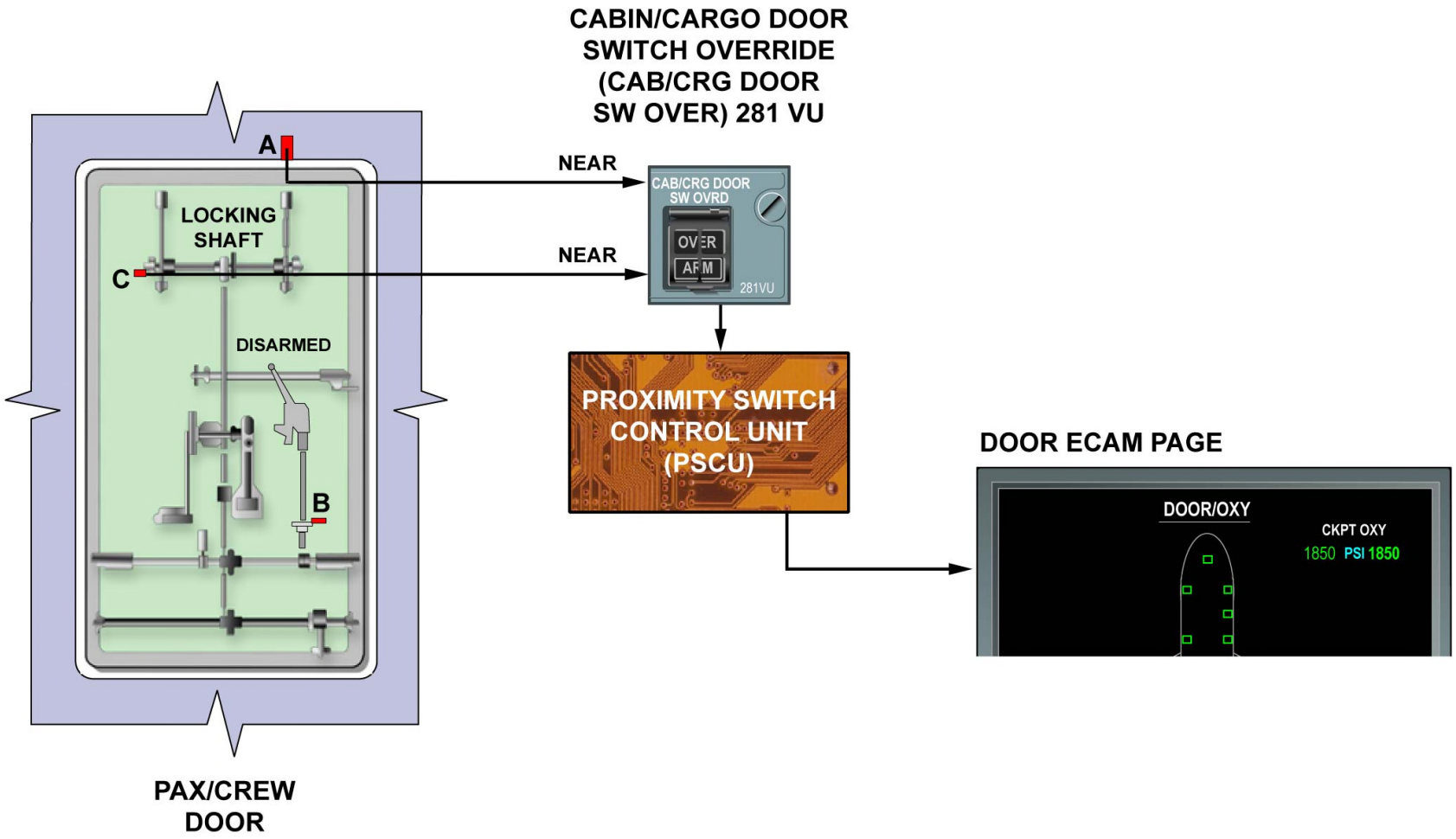
DOOR INDICATING AND WARNING

The locking shaft and door frame proximity sensors give a door indication on the DOOR ECAM page via the door switch override and the Proximity Sensors Control Unit (PSCU).

LOCKING AND LATCHING

When the door is locked and latched, the proximity sensors are NEAR. The door is closed, the door symbol is green and there is no message on the DOOR ECAM page. In the cockpit on the overhead panel a pushbutton CAB/CRG DOO SW OVER is installed. With this pushbutton the crew can override a proximity switch of a door, which is shown as "OPEN" on the ECAM System Display using a dedicated override procedure. In case of a door "OPEN" message on the ECAM System Display it is possible to identify the sensor and the maintenance message.

G7508471 - G3NT1T0 - FM52D9F52G20202



DOOR INDICATING AND WARNING - LOCKING AND LATCHING

G7508471 - G3NT1T0 - FM52D9F52G20202

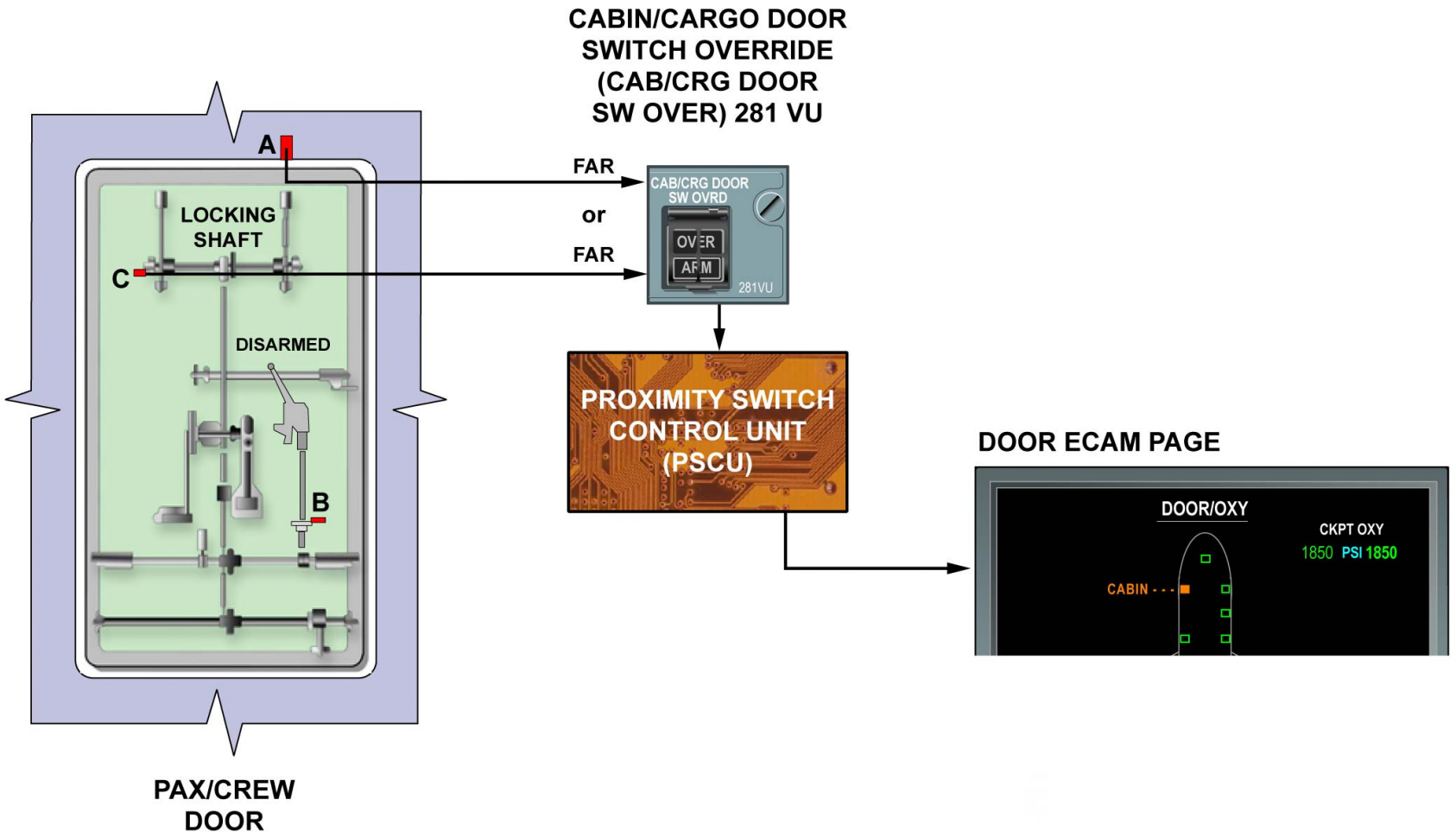
DOOR & SLIDE CONTROL SYSTEM PAX/CREW DOOR D/O (3)

DOOR INDICATING AND WARNING (continued)

UNLOCKING

The door is not locked, as soon as one proximity sensor is FAR. The door is open, the door symbol and message "CABIN" are amber.

G7508471 - G3NT1T0 - FM52D9F52G20202



DOOR INDICATING AND WARNING - UNLOCKING

G7508471 - G3NT1T0 - FM52D9F52G20202

DOOR & SLIDE CONTROL SYSTEM PAX/CREW DOOR D/O (3)

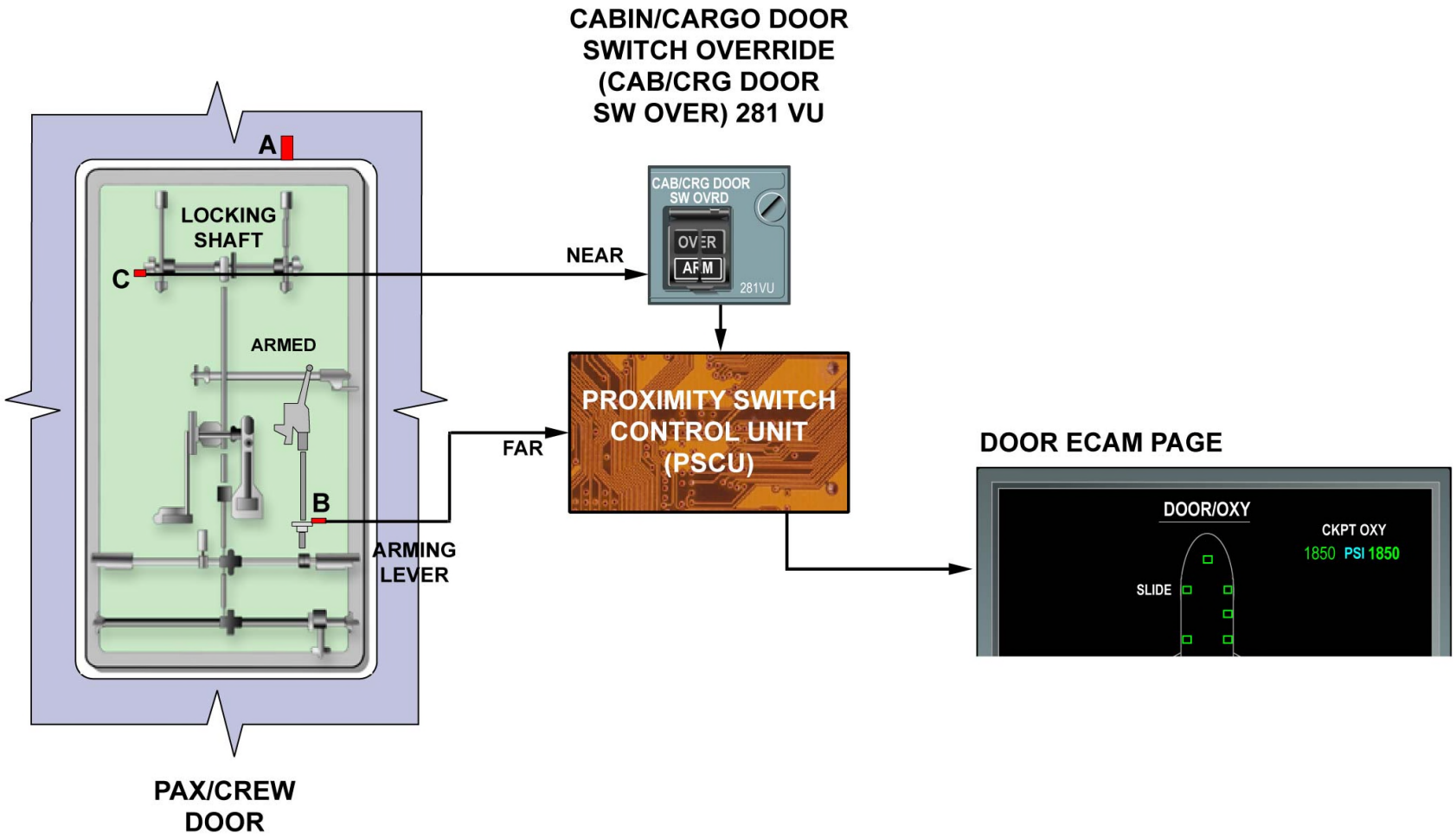
ESCAPE SLIDE RELEASE INDICATING AND WARNING

The locking shaft and the arming lever proximity sensors give an escape slide condition indication on the DOOR ECAM page and on the door itself via the PSCU.

ARMED LOCKED

When the escape slide is armed and door locked, the word "SLIDE" appears in white on the ECAM page and the door symbol is green.

G7508471 - G3NT1T0 - FM52D9F52G20202



ESCAPE SLIDE RELEASE INDICATING AND WARNING - ARMED LOCKED

G7508471 - G3NT1T0 - FM52D9F52G20202

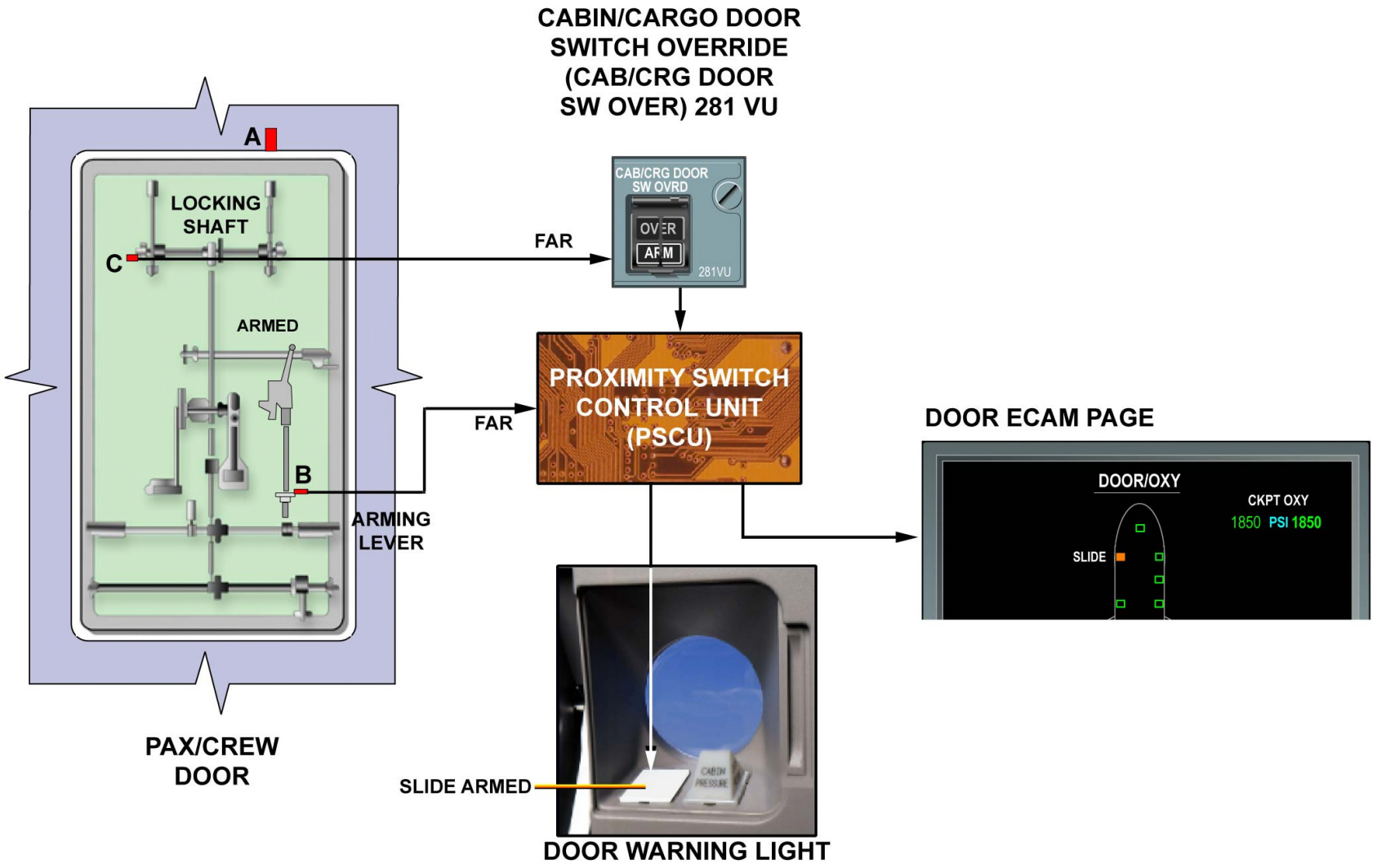
DOOR & SLIDE CONTROL SYSTEM PAX/CREW DOOR D/O (3)

ESCAPE SLIDE RELEASE INDICATING AND WARNING (continued)

ARMED NOT LOCKED

When the escape slide is armed but not locked, the word "SLIDE" appears on the ECAM page and the door symbol is amber. In addition to these indications, the "SLIDE ARMED" light comes on steady on the door.

G7508471 - G3NT1T0 - FM52D9F52G20202



ESCAPE SLIDE RELEASE INDICATING AND WARNING - ARMED NOT LOCKED

G7508471 - G3NT1T0 - FM52D9F52G20202

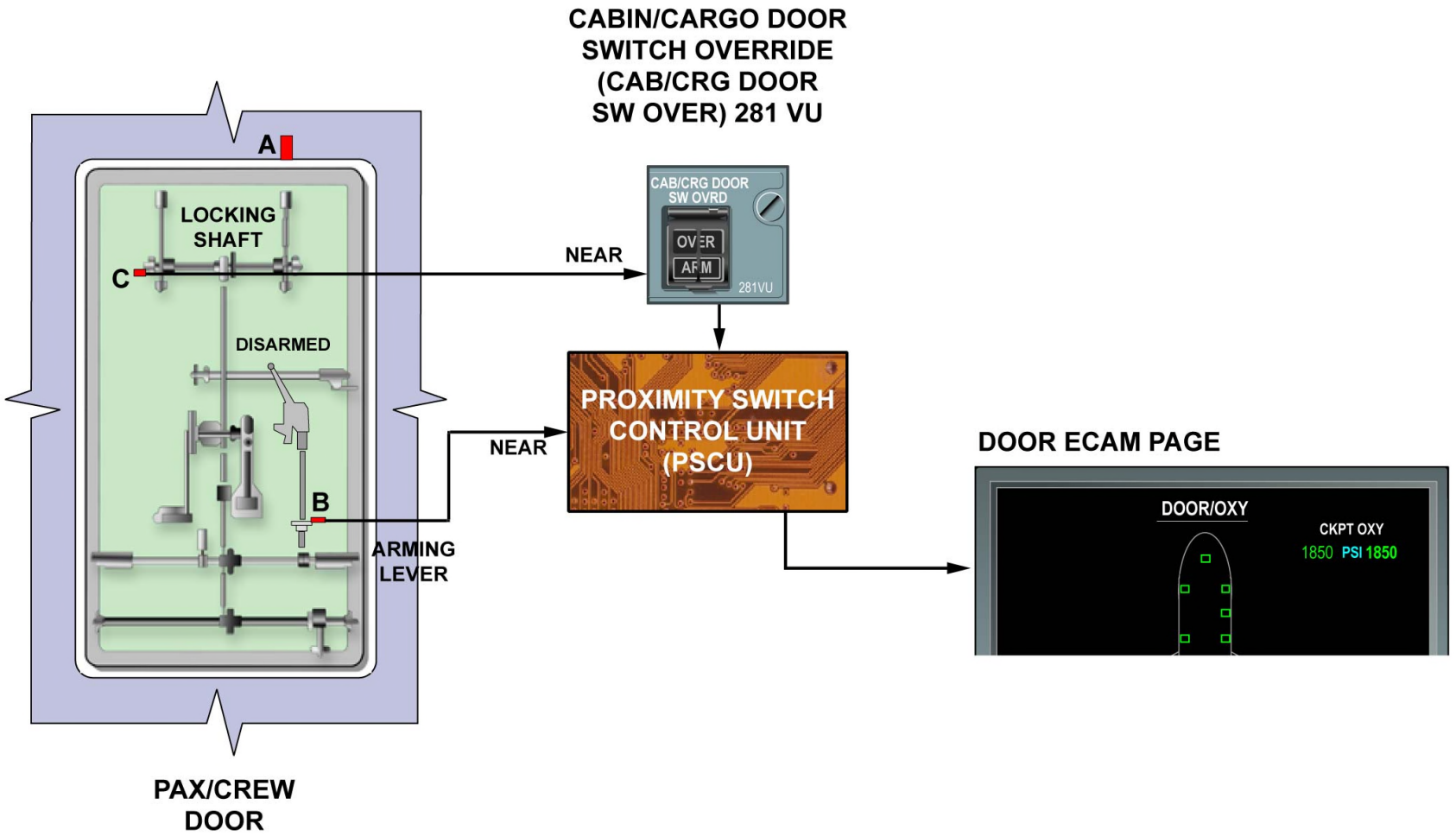
DOOR & SLIDE CONTROL SYSTEM PAX/CREW DOOR D/O (3)

ESCAPE SLIDE RELEASE INDICATING AND WARNING (continued)

DISARMED LOCKED

When the escape slide is disarmed and door locked, the word "SLIDE" disappears and the door symbol is green.

G7508471 - G3NT1T0 - FM52D9F52G20202



ESCAPE SLIDE RELEASE INDICATING AND WARNING - DISARMED LOCKED

G7508471 - G3NT1T0 - FM52D9F52G20202

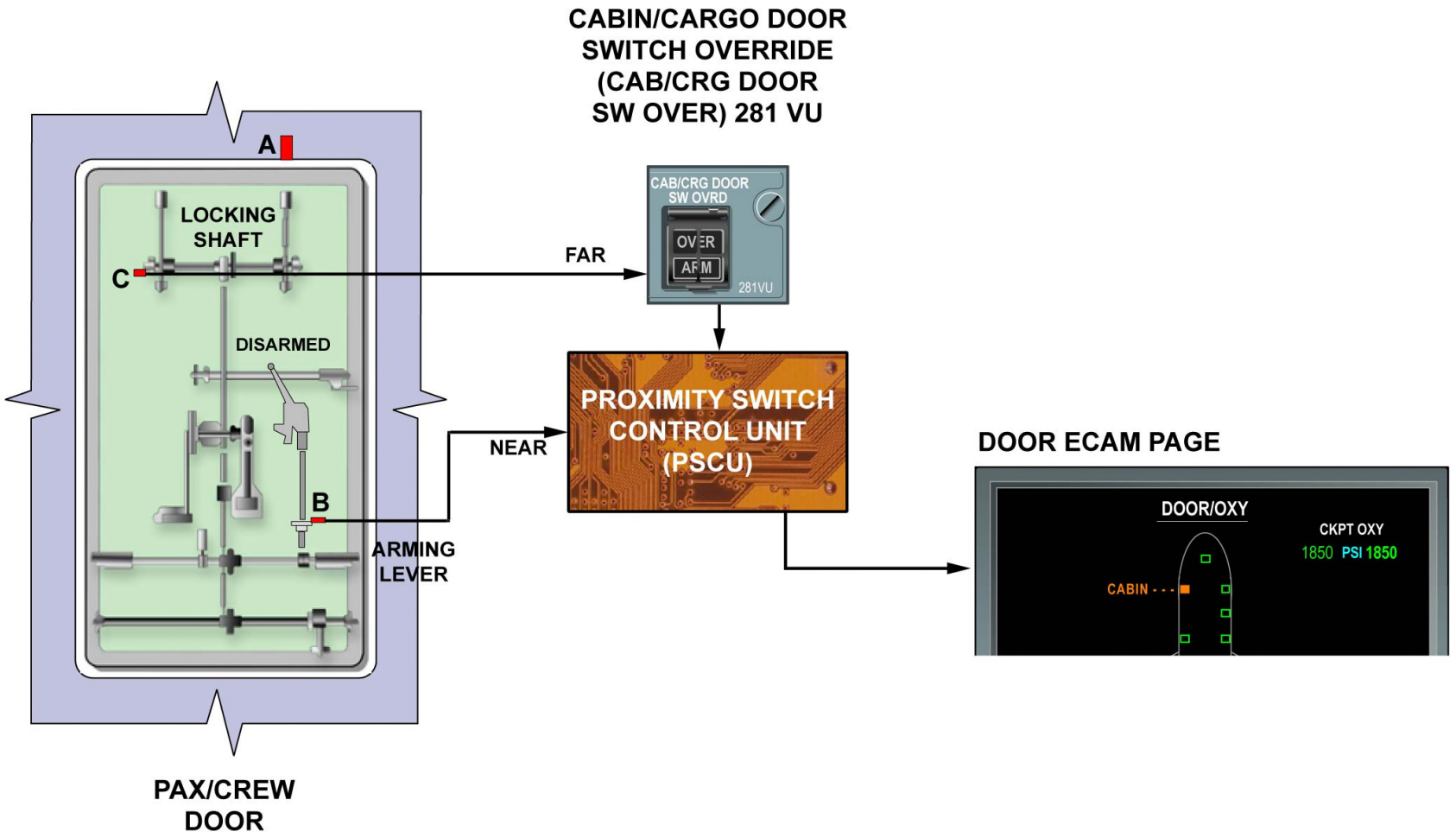
DOOR & SLIDE CONTROL SYSTEM PAX/CREW DOOR D/O (3)

ESCAPE SLIDE RELEASE INDICATING AND WARNING (continued)

DISARMED NOT LOCKED

When the escape slide is disarmed and door not locked, the door symbol is amber and an amber dashed line replaces the slide indication.

G7508471 - G3NT1T0 - FM52D9F52G20202



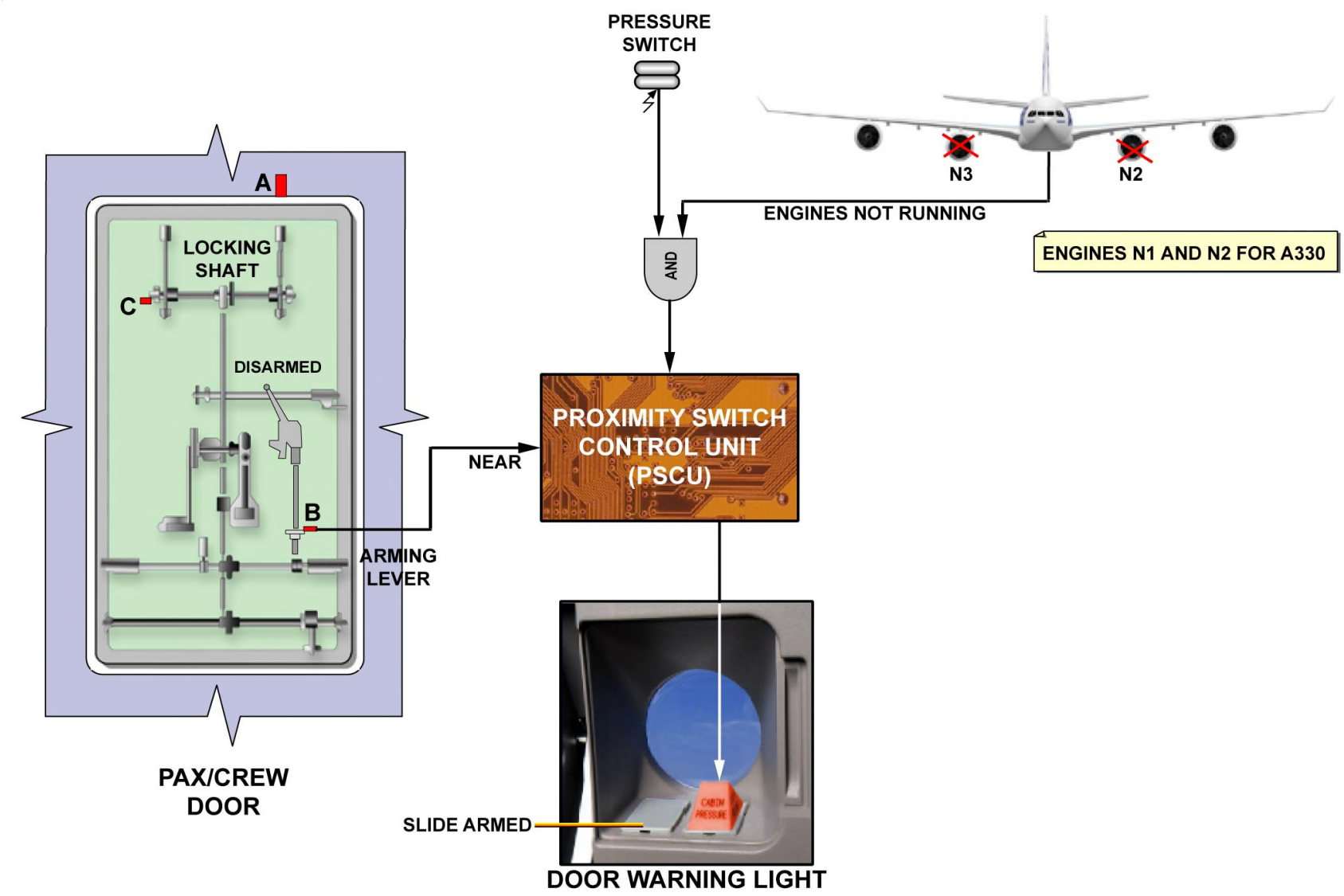
ESCAPE SLIDE RELEASE INDICATING AND WARNING - DISARMED NOT LOCKED

DOOR & SLIDE CONTROL SYSTEM PAX/CREW DOOR D/O (3)

CONTROL AND MONITORING

The red flashing light indicates an excessive residual cabin pressure and flashes if:
- engines N2 and N3 are not running,
- residual cabin pressure is greater than 2.5 mbars,
- the escape slide is disarmed.

G7508471 - G3NT1T0 - FM52D9F52G20202



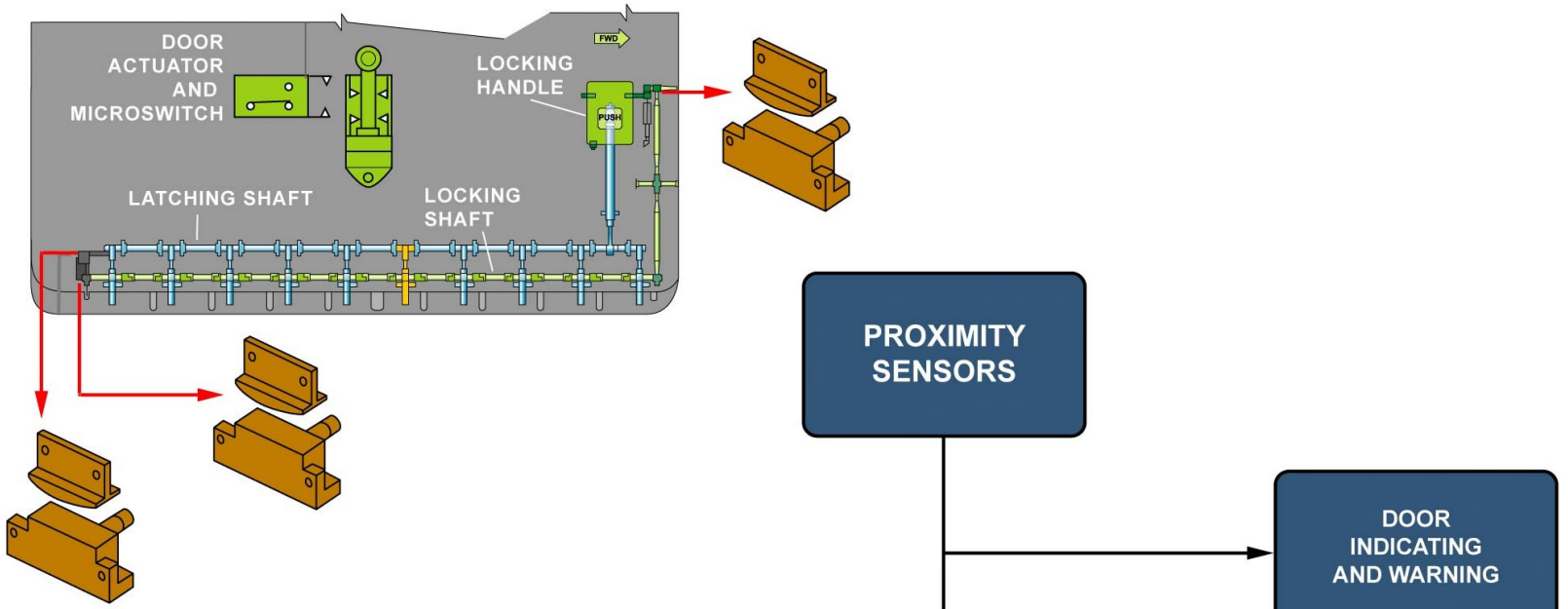
CONTROL AND MONITORING

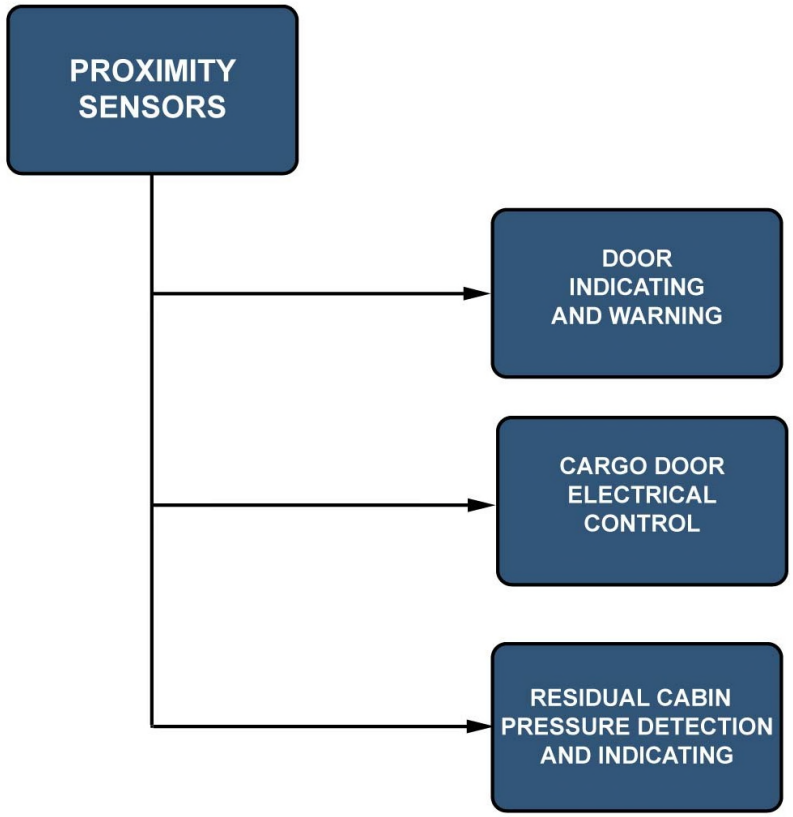
DSCS FORWARD AND AFT CARGO DOOR D/O (3)

GENERAL

The FWD and aft cargo doors have three similar proximity sensors, which are part of:
- the door indicating and warning system,
- the cargo door electrical control system,
- the residual cabin pressure detection and indicating system.

G7508471 - G3NT1T0 - FM52DAF52G70303


DOOR
ACTUATOR
AND
MICROSWITCH
LOCKING
HANDLE
FWD
PUSH
LATCHING SHAFT
LOCKING
SHAFT


PROXIMITY
SENSORS
DOOR
INDICATING
AND WARNING
CARGO DOOR
ELECTRICAL
CONTROL
RESIDUAL CABIN
PRESSURE DETECTION
AND INDICATING

GENERAL

DSCS FORWARD AND AFT CARGO DOOR D/O (3)

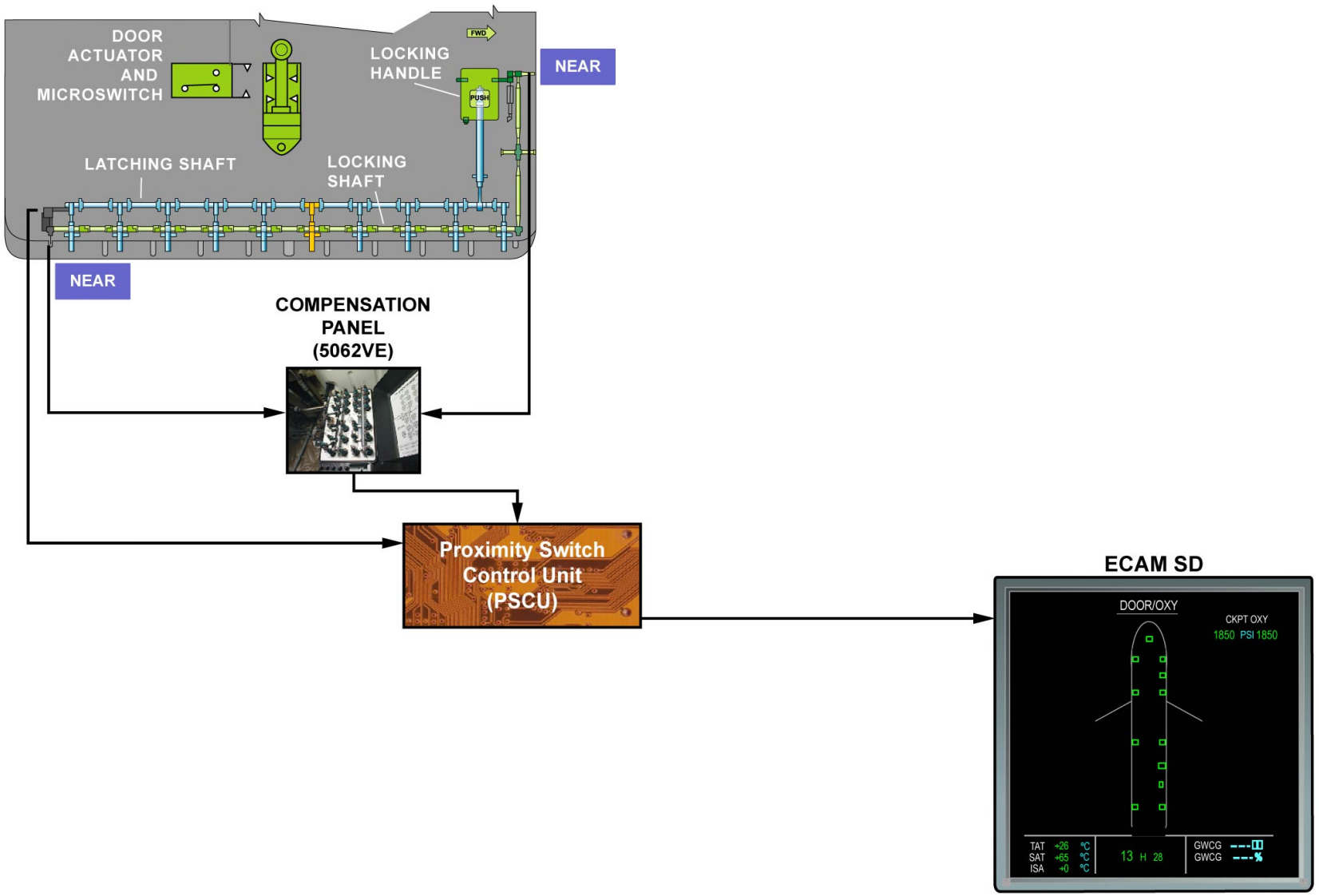
DOOR INDICATING AND WARNING SYSTEM

The locking handle and locking shaft proximity sensors provide the door condition indication on the ECAM via the Proximity Switch Control Unit (PSCU).

LOCKED

When the door is latched and locked, both proximity sensors are NEAR. The door symbols are green on the door ECAM page.

G7508471 - G3NT1T0 - FM52DAF52G70303



DOOR INDICATING AND WARNING SYSTEM - LOCKED

G7508471 - G3NT1T0 - FM52DAF52G70303

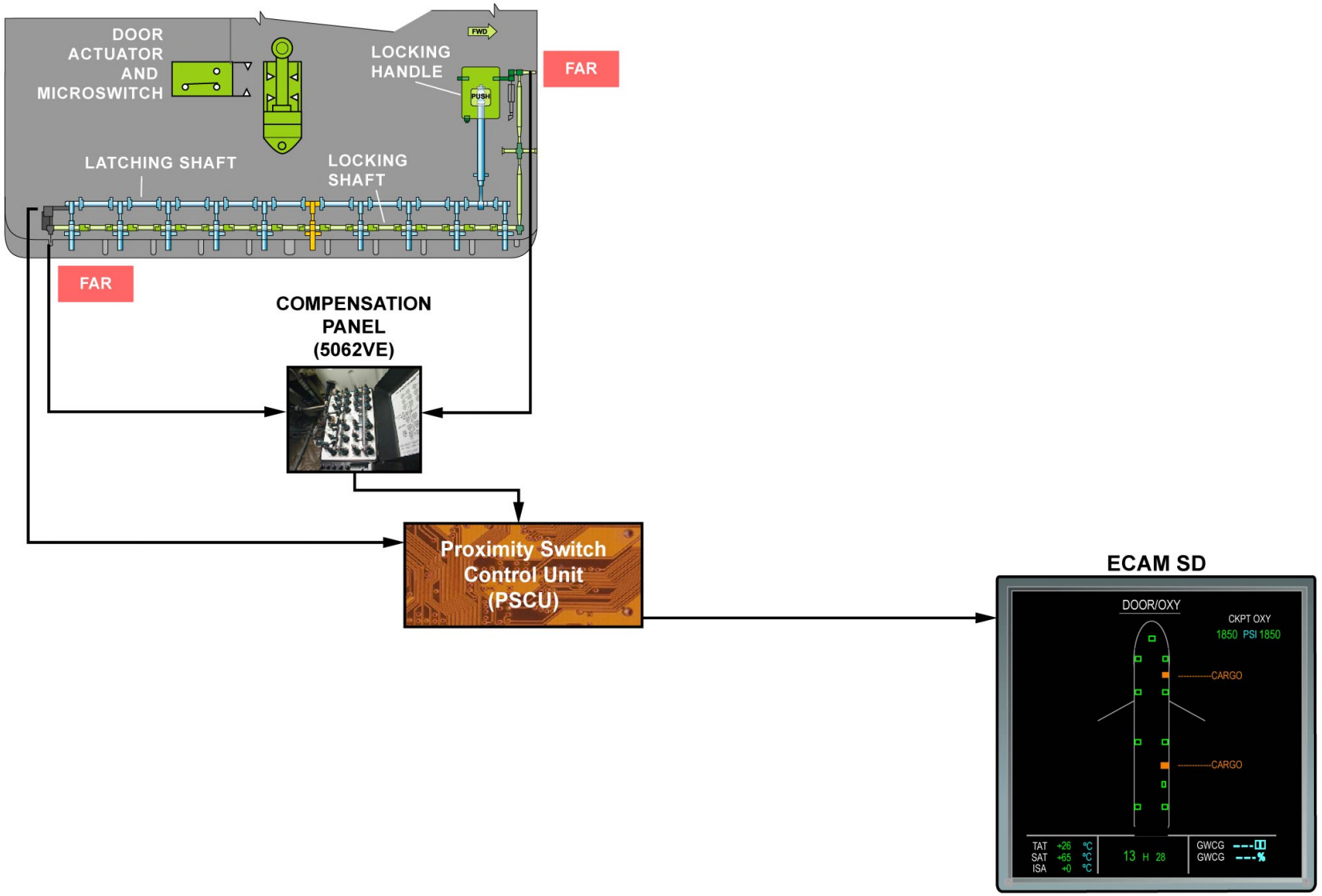
DSCS FORWARD AND AFT CARGO DOOR D/O (3)

DOOR INDICATING AND WARNING SYSTEM (continued)

NOT LOCKED

As soon as one of the two proximity sensors is FAR, the door is indicated as unlocked on the ECAM page. The door symbols are amber.

G7508471 - G3NT1T0 - FM52DAF52G70303



DOOR INDICATING AND WARNING SYSTEM - NOT LOCKED

G7508471 - G3NT1T0 - FM52DAF52G70303

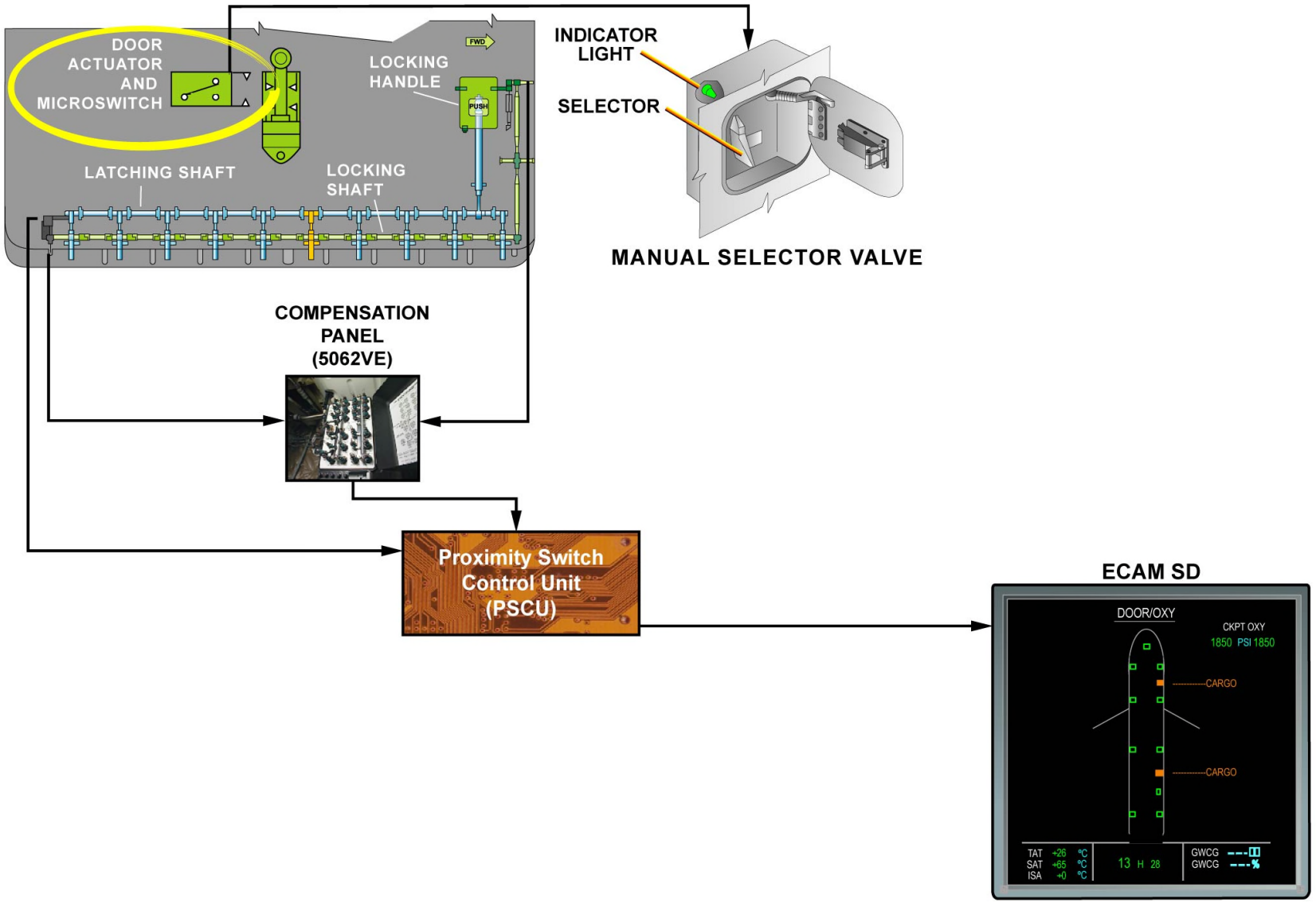
DSCS FORWARD AND AFT CARGO DOOR D/O (3)

DOOR INDICATING AND WARNING SYSTEM (continued)

FULLY OPEN

When the door reaches the fully open position, the door actuator switch comes on, on the green indicator light installed in the manual selector valve panel.

G7508471 - G3NT1T0 - FM52DAF52G70303



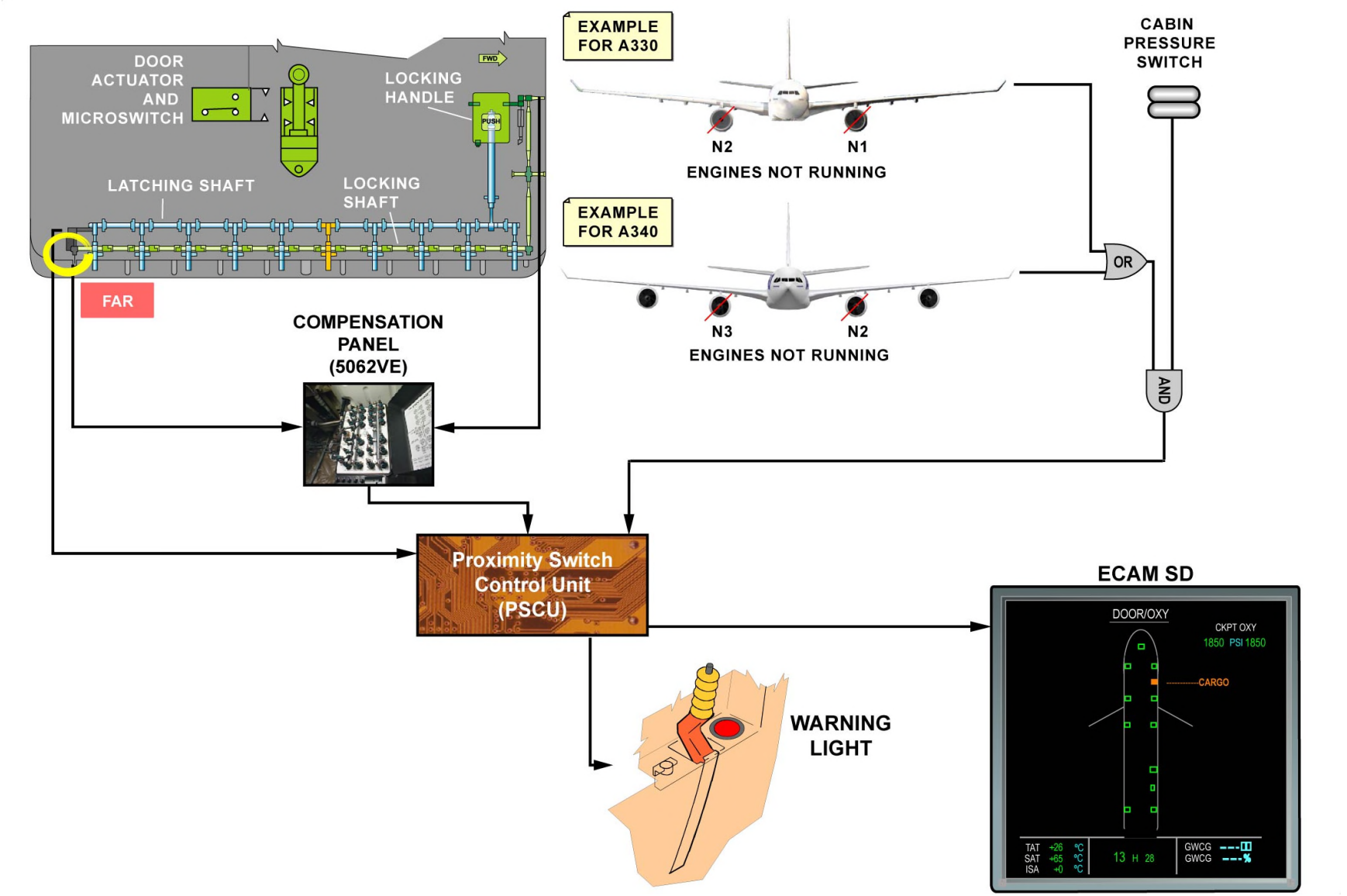
DOOR INDICATING AND WARNING SYSTEM - FULLY OPEN

DSCS FORWARD AND AFT CARGO DOOR D/O (3)

RESIDUAL PRESSURE

The red flashing light indicates an excessive residual cabin pressure and it is visible only if the locking handle is opened. The red light flashes if engines N2 and N3 (for an A340) or engines N1 and N2 (for an A330) are not running, residual cabin pressure greater than 2.5 mbars, and the locking shaft proximity sensor is FAR.

G7508471 - G3NT1T0 - FM52DAF52G70303



RESIDUAL PRESSURE

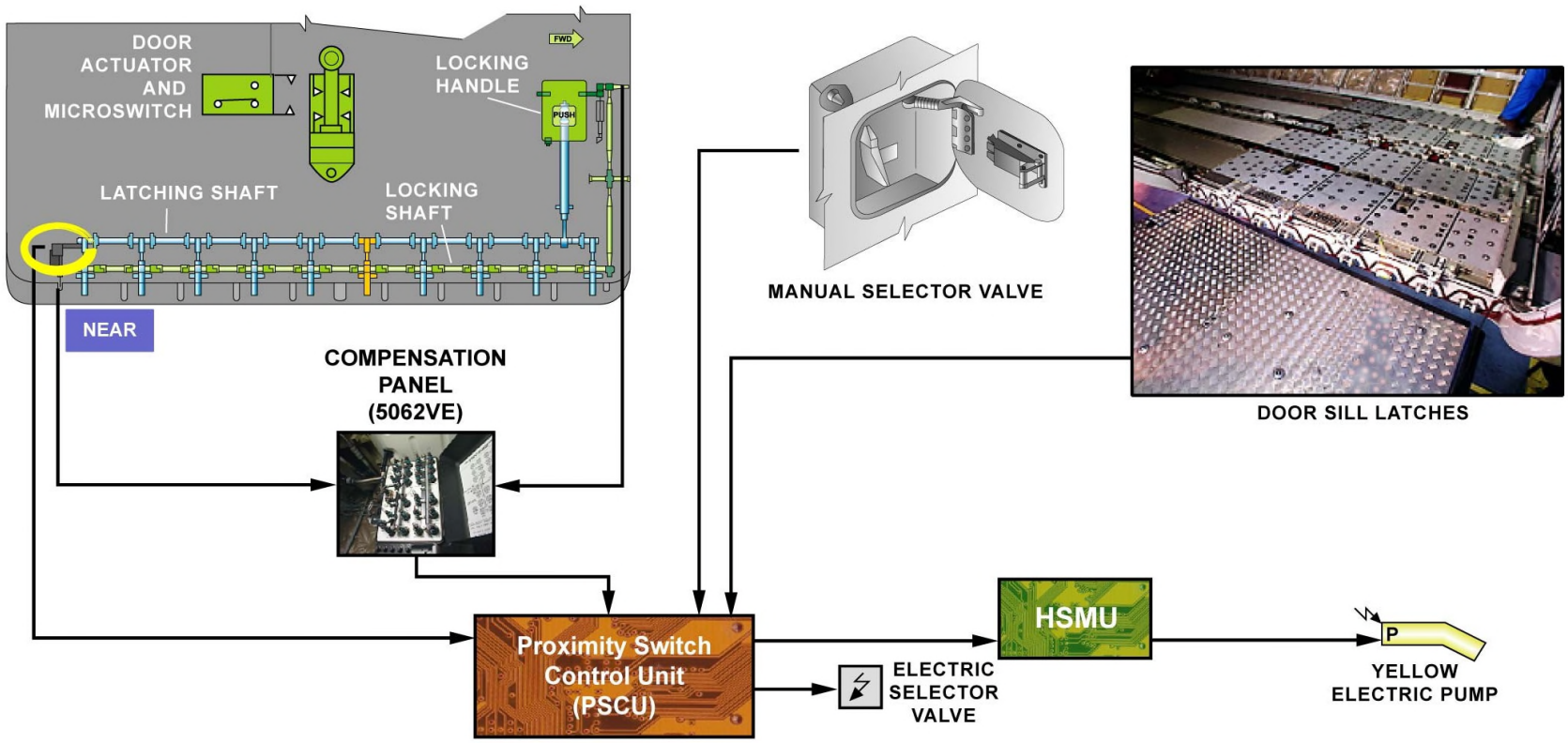
DSCS FORWARD AND AFT CARGO DOOR D/O (3)

ELECTRICAL CONTROL SYSTEM

The electrical selector valve is supplied when:
- the latching shaft proximity sensor is NEAR,
- the door sill latches are up,
- the manual selector valve is operated (the integrated proximity sensor sends a signal to the PSCU).

The PSCU also sends a signal to the Hydraulic System Monitoring Unit (HSMU) to:
- close the yellow leak measurement valve,
- inhibit flap operation,
- start the yellow electric pump.

G7508471 - G3NT1T0 - FM52DAF52G70303



ELECTRICAL CONTROL SYSTEM

G7508471 - G3NT1T0 - FM52DAF52G70303

DSCS BULK CARGO & AVIONICS COMPT DOORS D/O (3)

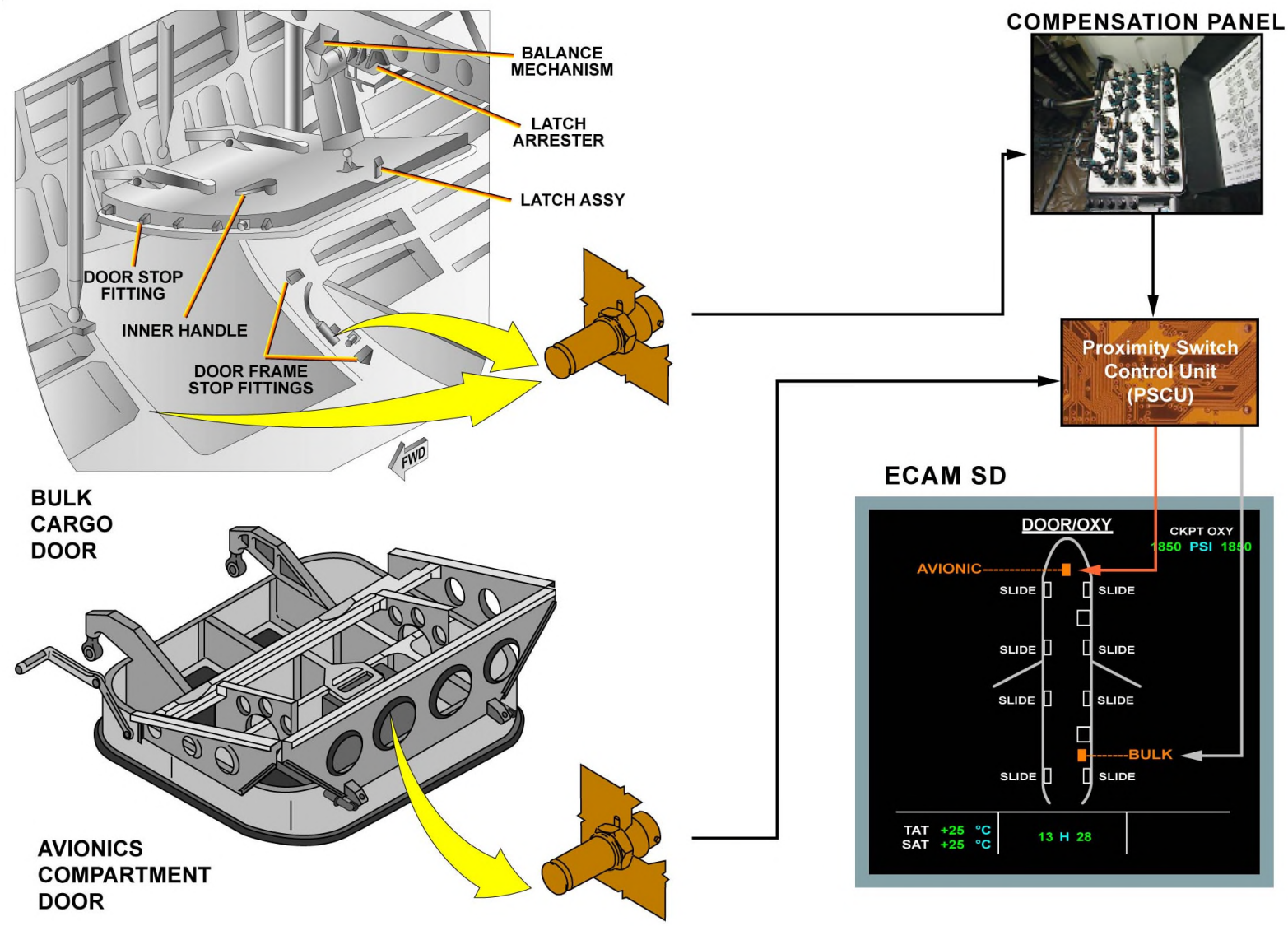
BULK CARGO DOOR

Two proximity sensors control the door warning function of the bulk cargo door. The sensors are installed on either side of the door frame on the fuselage and are also used to prevent pressurization if the door is not fully closed or one sensor is defective.

AVIONICS COMPARTMENT DOOR

The avionics floor door uses a single sensor for the door warning function. It is installed on the door frame on the fuselage.

G7508471 - G3NT1T0 - FM52DBF52G90203



BULK CARGO DOOR & AVIONICS COMPARTMENT DOOR

G7508471 - G3NT1T0 - FM52DBF52G90203

DOORS SYSTEM BASE MAINTENANCE (3)

INTRODUCTION

This module will cover the following procedures:
- discharging / charging of the Door Damper and Emergency Operation Cylinder,
- BITE Test of the Autonomous Standby Power Supply Unit (ASPSU),
- battery Capacity Test of the ASPSU.

Special precautions must be taken before working on the door.

WARNING: HIGH GAS PRESSURE CAN CAUSE SKIN INJURY. GAS CAN GET INTO YOUR BLOOD AND CAUSE DEATH.

CAUTION: DO NOT APPLY MORE THAN THE SPECIFIED TORQUE ON THE NUT OF THE FILLING VALVE. OVERTORQUE WILL CAUSE DAMAGE TO THE VALVE, AND WILL THUS CAUSE LEAKAGE OF NITROGEN FROM THE CYLINDER.

WARNING: DO NOT FILL THE DOOR DAMPER AND EMERGENCY-OPERATION CYLINDER TO A PRESSURE HIGHER THAN 123 BARS (1783 PSI) FOR THE A340 AND 120 BARS (1740) FOR THE A330. TOO MUCH PRESSURE DURING CYLINDER FILLING CAN CAUSE INJURY AND/OR DAMAGE.

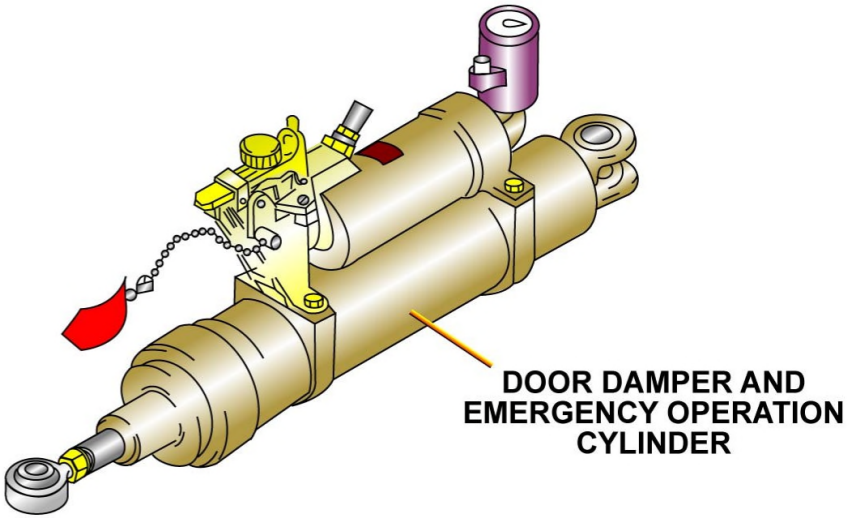
WARNING: MAKE SURE THAT THE SAFETY DEVICES AND THE WARNING NOTICES ARE IN POSITION BEFORE YOU START A TASK ON OR NEAR:
- THE FLIGHT CONTROLS,
- THE FLIGHT CONTROL SURFACES,
- THE LANDING GEAR AND THE RELATED DOORS,
- COMPONENTS IN MOTION.

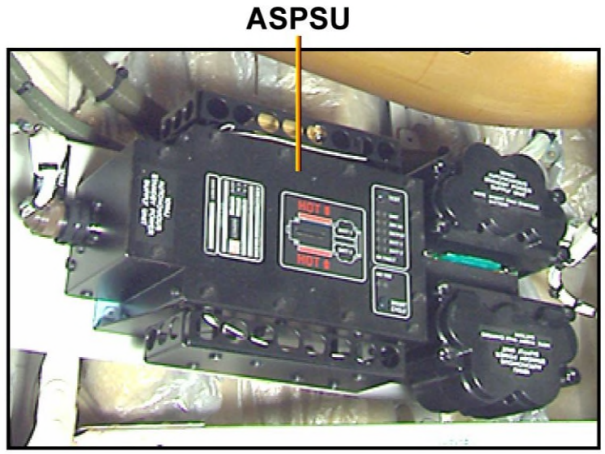
MOVEMENT OF COMPONENTS CAN KILL OR INJURE PERSONS.

WARNING: BEFORE YOU START WORKING ON THE DOOR MAKE SURE THAT:
- THE EMERGENCY CONTROL HANDLE IS IN THE DISARMED POSITION WITH THE SAFETY PIN INSTALLED,
- THE PERCUSSION LEVER OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER IS IN THE DISARMED POSITION WITH THE SAFETY PIN INSTALLED. THESE PRECAUTIONS ENSURE THAT THE DOOR DOES NOT OPEN SUDDENLY. IF THE DOOR OPENS SUDDENLY, IT CAN CAUSE INJURY AND / OR DAMAGE.

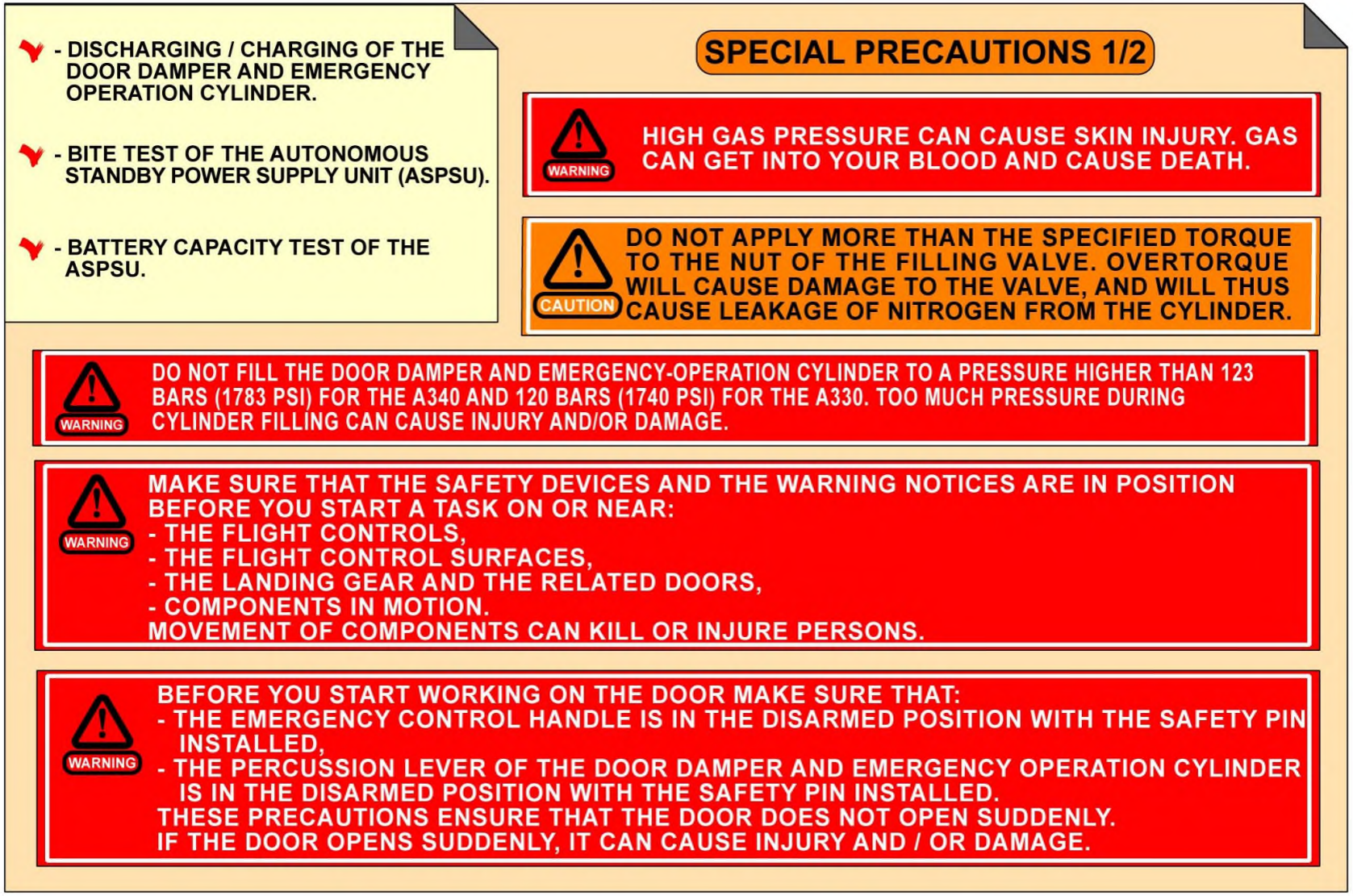
WARNING: USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS ONLY IN PROPERLY VENTILATED CONDITIONS (VENTILATED AREA). THESE MATERIALS ARE POISONOUS, FLAMMABLE AND SKIN IRRITANTS. OBEY THE MANUFACTURERS INSTRUCTIONS. PUT ON PROTECTIVE CLOTHING. AVOID CONTACT WITH YOUR MOUTH. DO NOT SMOKE. DO NOT BREATHE IN THE GAS. GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

- DISCHARGING / CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER.
- BITE TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU).
- BATTERY CAPACITY TEST OF THE ASPSU.





INTRODUCTION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- BITE TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU).
- BATTERY CAPACITY TEST OF THE ASPSU.
SPECIAL PRECAUTIONS 1/2
WARNING
HIGH GAS PRESSURE CAN CAUSE SKIN INJURY. GAS CAN GET INTO YOUR BLOOD AND CAUSE DEATH.
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DO NOT APPLY MORE THAN THE SPECIFIED TORQUE TO THE NUT OF THE FILLING VALVE. OVERTORQUE WILL CAUSE DAMAGE TO THE VALVE, AND WILL THUS CAUSE LEAKAGE OF NITROGEN FROM THE CYLINDER.
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WARNING
MAKE SURE THAT THE SAFETY DEVICES AND THE WARNING NOTICES ARE IN POSITION BEFORE YOU START A TASK ON OR NEAR:
- THE FLIGHT CONTROLS,
- THE FLIGHT CONTROL SURFACES,
- THE LANDING GEAR AND THE RELATED DOORS,
- COMPONENTS IN MOTION.
MOVEMENT OF COMPONENTS CAN KILL OR INJURE PERSONS.
WARNING
BEFORE YOU START WORKING ON THE DOOR MAKE SURE THAT:
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- THE PERCUSSION LEVER OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER IS IN THE DISARMED POSITION WITH THE SAFETY PIN INSTALLED.
THESE PRECAUTIONS ENSURE THAT THE DOOR DOES NOT OPEN SUDDENLY.
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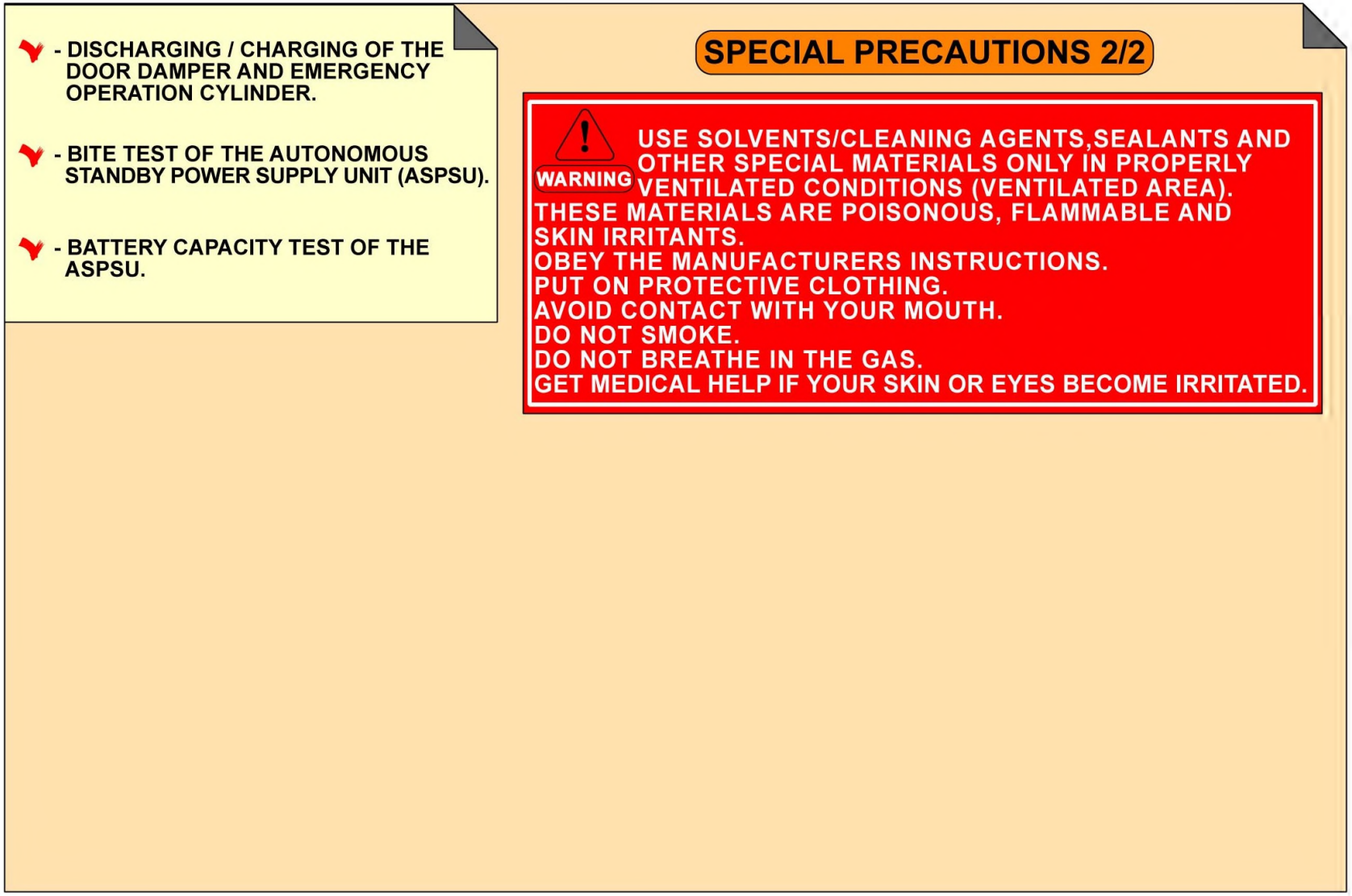
INTRODUCTION


- DISCHARGING / CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER.
- BITE TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU).
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DO NOT SMOKE.
DO NOT BREATHE IN THE GAS.
GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

INTRODUCTION

DOORS SYSTEM BASE MAINTENANCE (3)

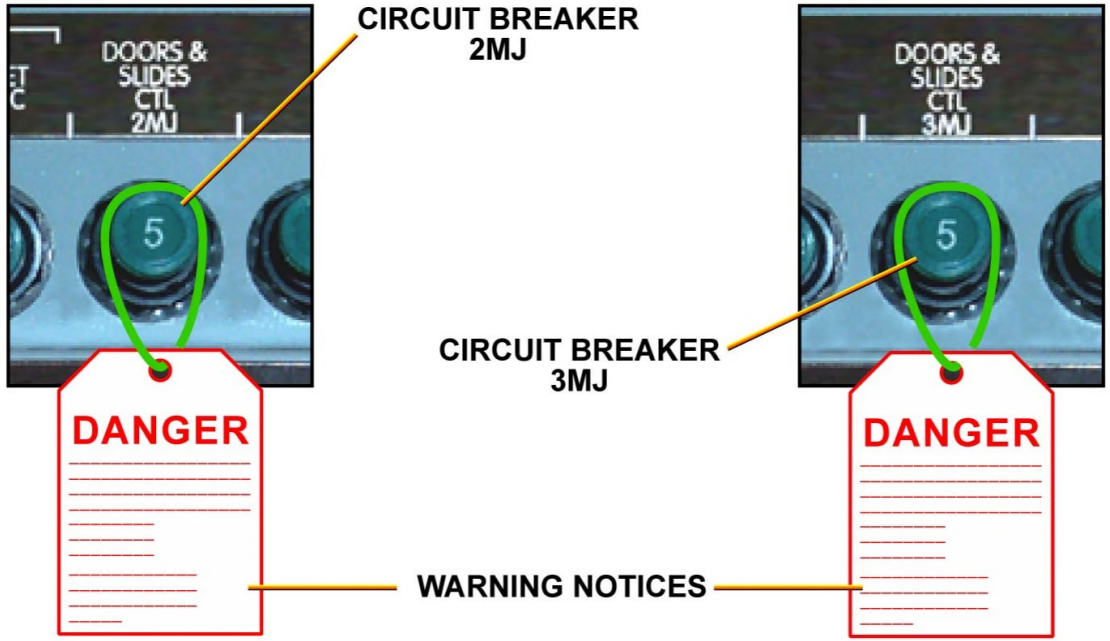
DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

The AMM procedure is similar for all passenger / crew doors.
Make sure that the C/Bs 2MJ and 3MJ are opened, safetied and tagged.
To discharge the gas cylinder, remove the blanking cap from the filling valve.
Slowly loosen the filling valve nut to release the pressure as required.
Then tighten the filling valve nut to the specified torque value when the pressure gauge shows the correct pressure. Note that when the pressure drops to zero, then you can tighten the filling valve nut with your hand.
At the end, re-install the blanking cap on the filling valve.
To charge the gas cylinder, connect a filling system (Dry air or Nitrogen) with a pressure gauge to the filling valve.
Fill the cylinder with the correct pressure as follows: slowly open the control valve of the filling system and close it when the pressure gauge shows 55 bars (797.7073 psi).
After 3 seconds open the control valve again and close it when the pressure gauge shows 83 bars (1203.8129 psi).
3 seconds later open the control valve again and close it when the pressure gauge shows 123 bars (1783.9637 psi) for the A340 and 120 bars (1740.4524 psi) for the A330. Note that the cylinder is correctly pressurized when the pointer of the pressure gauge is in the green area.
Tighten the filling valve nut with your hand. Remove the extension adapter from the filling valve when the pressure is stable. Tighten the filling valve nut to the specified torque value and install the blanking cap.
The task has been completed.

Discharging/Charging of the Door Damper and Emergency Operation Cylinder
...
Job set-up
...
Open,safety and tag these circuit breakers:

721VU	DOORS &SLIDES CTL	3MJ	N12 (for A340)
721VU	DOORS &SLIDES CTL	3MJ	N12 (for A330)
722VU	DOORS &SLIDES CTL	2MJ	P41

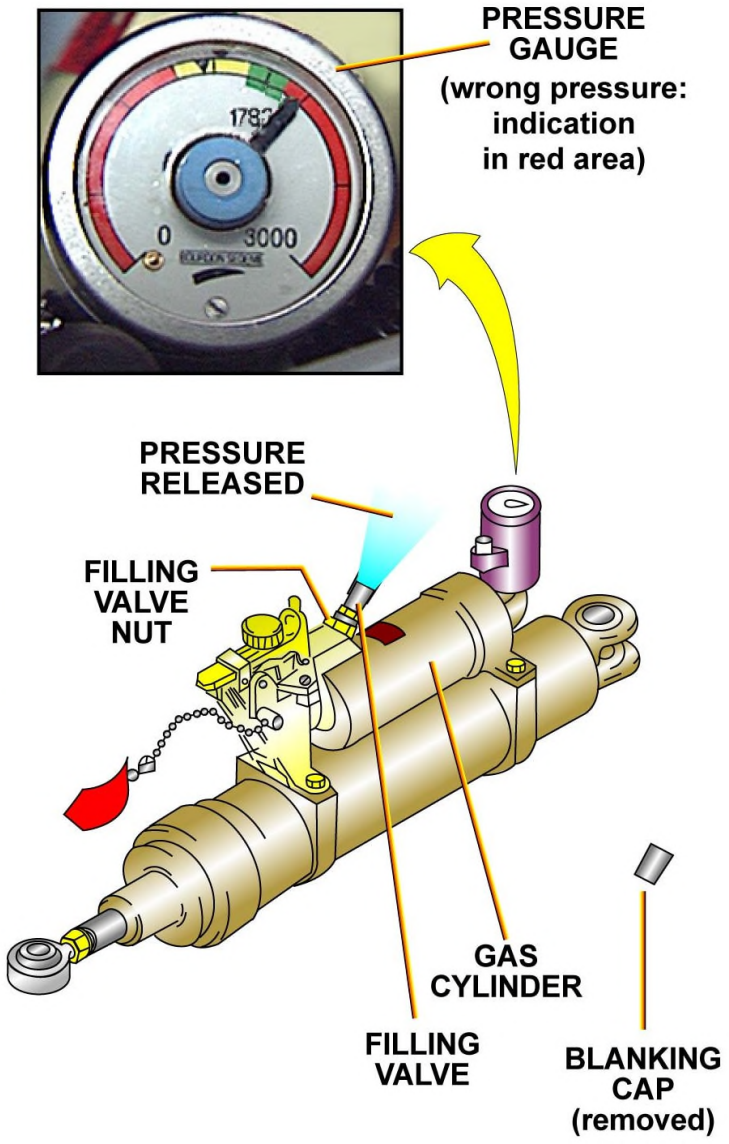
...
Procedure
...
Close-up
...



DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

Discharging/Charging of the Door Damper and Emergency Operation Cylinder
...
Job set-up
...
Procedure
...
Discharging of the Cylinder
...
Remove the blanking cap from the filling valve.
Slowly loosen the filling valve nut to release the pressure as required.
Tighten the filling valve nut to the specified torque value when the pressure gage shows the correct pressure.
NOTE: When the pressure is decreased to zero, then you can tighten the filling valve nut with your hand.
Install the blanking cap on the filling valve.
...
Charging of the Cylinder
...
...
Close-up
...



DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

Discharging/Charging of the Door Damper and Emergency Operation Cylinder

...

✓ **Job set-up**

...

Procedure

...

⇨ **Discharging of the Cylinder**

...

Remove the blanking cap from the filling valve.

Slowly loosen the filling valve nut to release the pressure as required.

Tighten the filling valve nut to the specified torque value when the pressure gage shows the correct pressure.

NOTE: When the pressure is decreased to zero, then you can tighten the filling valve nut with your hand.

Install the blanking cap on the filling valve.

...

Charging of the Cylinder

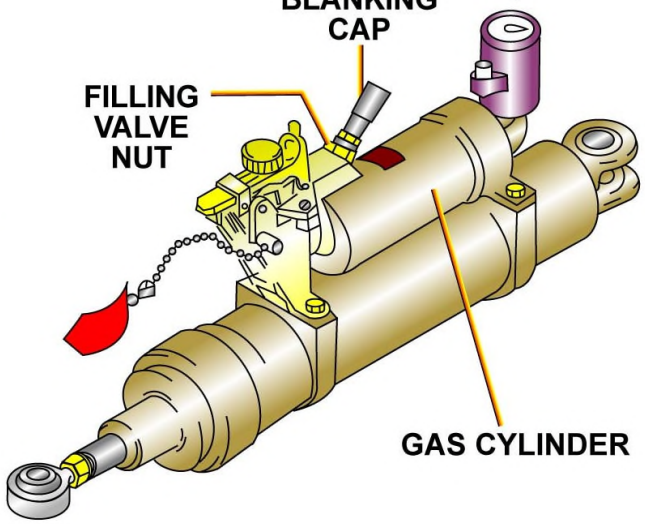
...

...

Close-up

...

PRESSURE GAUGE
(correct pressure: indication in green area)



NOTE:
When the pressure drops to zero, then you can tighten the filling valve nut with your hand.

DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Discharging/Charging of the Door Damper and Emergency Operation Cylinder

...

✓ **Job set-up**

...

Procedure

...

✓ **Discharging of the Cylinder**

...

⇨ **Charging of the Cylinder**

...

Connect a filling system (Dry air or Nitrogen) with a pressure gauge to the filling valve.

...

Fill the cylinder with the correct pressure as follows:

- **Slowly open the control valve of the filling system and close it when the pressure gauge shows 55 bars (797.7073 psi).**
- **After 3 seconds open the control valve again and close it when the pressure gauge shows 83 bars (1203.8129 psi).**
- **After 3 more seconds open the control valve again and close it when the pressure gauge shows 123 bars (1783.9637 psi) for the A340 and 120 bars (1740.4524 psi) for the A330.**

NOTE:The cylinder is correctly pressurized when the pointer of the pressure gauge is in the green area.

Tighten the filling valve nut with your hand.

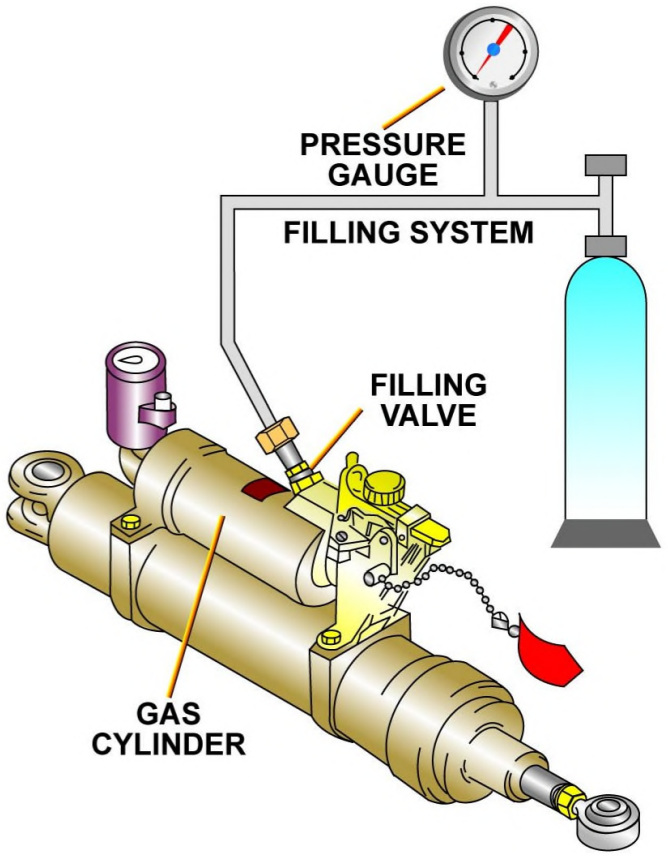
Remove the extension adapter from the filling valve when the pressure is stable.

Tighten the filling valve nut to the specified torque value.

...

Close-up

...



DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

Discharging/Charging of the Door Damper and Emergency Operation Cylinder

...

✓ **Job set-up**

...

Procedure

...

✓ **Discharging of the Cylinder**

...

Charging of the Cylinder

...

✓ **Connect a filling system (Dry air or Nitrogen) with a pressure gauge to the filling valve.**

...

➡ **Fill the cylinder with the correct pressure as follows:**
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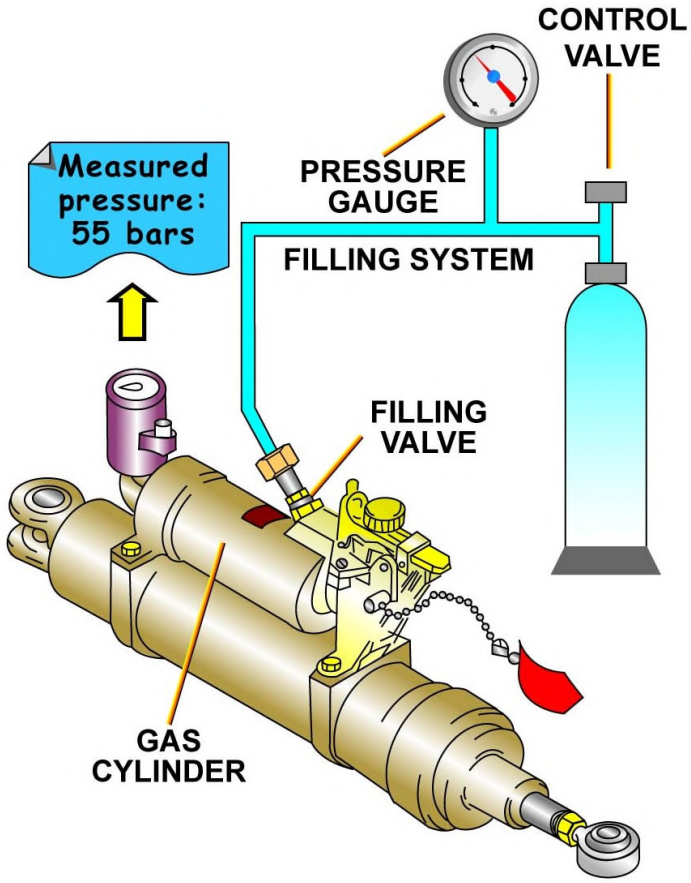
NOTE:The cylinder is correctly pressurized when the pointer of the pressure gauge is in the green area.
Tighten the filling valve nut with your hand.
Remove the extension adapter from the filling valve when the pressure is stable.
Tighten the filling valve nut to the specified torque value.

...

Close-up

...



DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

Discharging/Charging of the Door Damper and Emergency Operation Cylinder

...

✓ **Job set-up**

...

Procedure

...

✓ Discharging of the Cylinder

...

Charging of the Cylinder

...

✓ Connect a filling system (Dry air or Nitrogen) with a pressure gauge to the filling valve.

...

Fill the cylinder with the correct pressure as follows:

- Slowly open the control valve of the filling system and close it when the pressure gauge shows 55 bars (797.7073 psi).
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NOTE:The cylinder is correctly pressurized when the pointer of the pressure gauge is in the green area.

Tighten the filling valve nut with your hand.

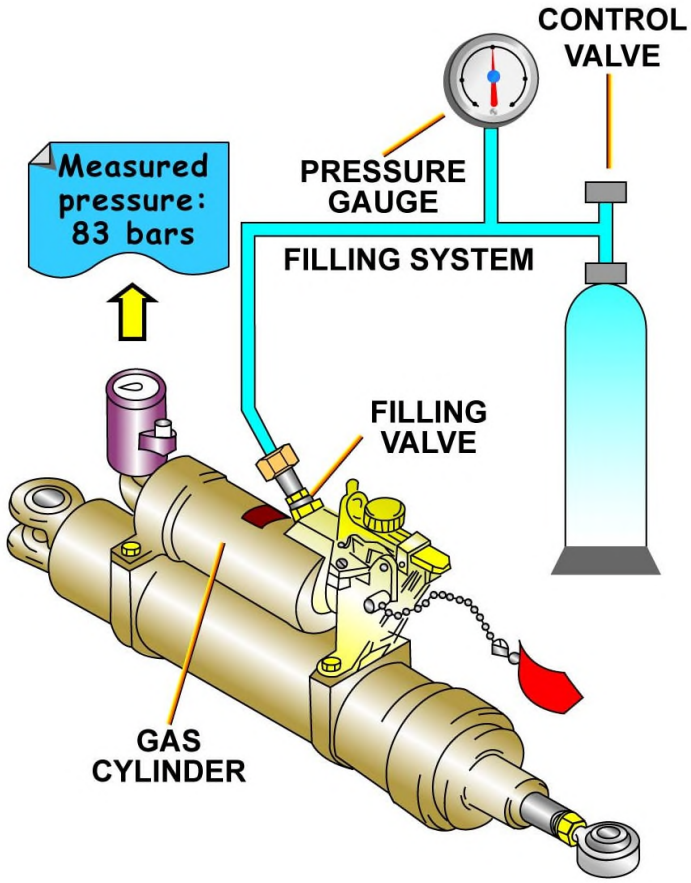
Remove the extension adapter from the filling valve when the pressure is stable.

Tighten the filling valve nut to the specified torque value.

...

Close-up

...



DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

Discharging/Charging of the Door Damper and Emergency Operation Cylinder

...

✓ Job set-up

...

Procedure

...

✓ Discharging of the Cylinder

...

Charging of the Cylinder

...

✓ Connect a filling system (Dry air or Nitrogen) with a pressure gauge to the filling valve.

...

✓ Fill the cylinder with the correct pressure as follows:

- Slowly open the control valve of the filling system and close it when the pressure gauge shows 55 bars (797.7073 psi).

✓ - After 3 seconds open the control valve again and close it when the pressure gauge shows 83 bars (1203.8129 psi).

⇨ - After 3 more seconds open the control valve again and close it when the pressure gauge shows 123 bars (1783.9637 psi) for the A340 and 120 bars (1740.4524 psi) for the A330.
NOTE:The cylinder is correctly pressurized when the pointer of the pressure gauge is in the green area.

Tighten the filling valve nut with your hand.

Remove the extension adapter from the filling valve when the pressure is stable.

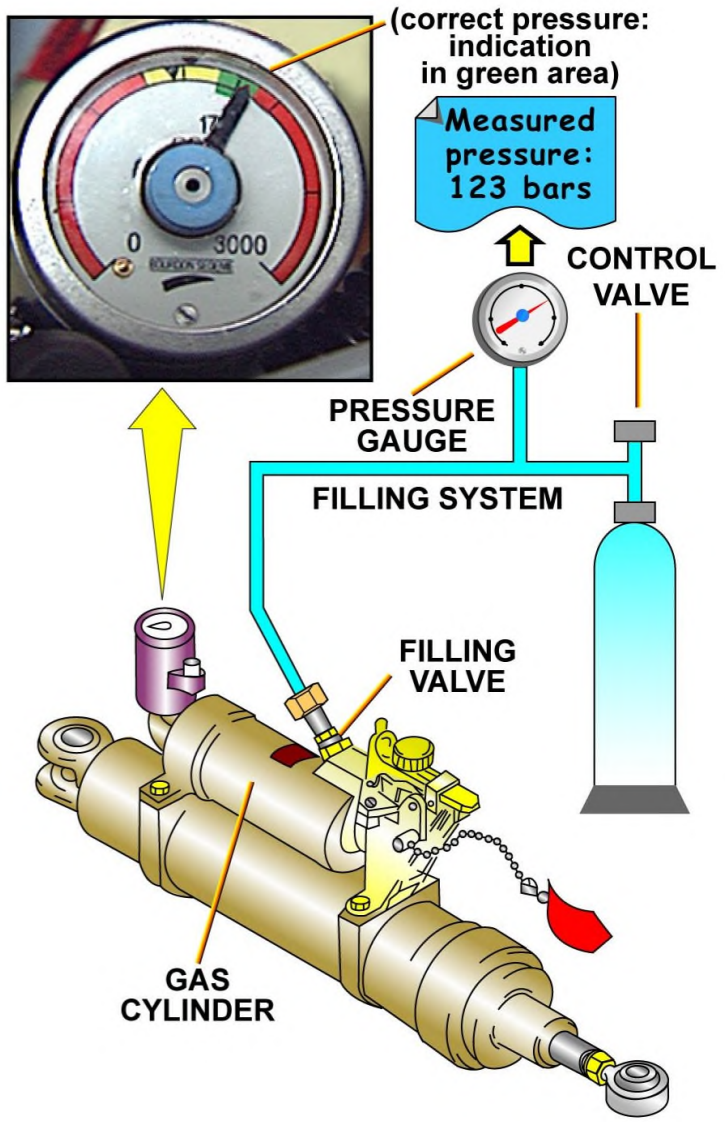
Tighten the filling valve nut to the specified torque value.

...

✓ Close-up

...

NOTE:
The cylinder is correctly pressurized when the pointer of the pressure gauge is in the green area.



DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

Discharging/Charging of the Door Damper and Emergency Operation Cylinder

...

✓ **Job set-up**

...

Procedure

...

✓ **Discharging of the Cylinder**

...

Charging of the Cylinder

...

✓ **Connect a filling system (Dry air or Nitrogen) with a pressure gauge to the filling valve.**

...

✓ **Fill the cylinder with the correct pressure as follows:**

- **Slowly open the control valve of the filling system and close it when the pressure gauge shows 55 bars (797.7073 psi).**
- **After 3 seconds open the control valve again and close it when the pressure gauge shows 83 bars (1203.8129 psi).**
- **After 3 more seconds open the control valve again and close it when the pressure gauge shows 123 bars (1783.9637 psi) for the A340 and 120 bars (1740.4524 psi) for the A330.**

NOTE:The cylinder is correctly pressurized when the pointer of the pressure gauge is in the green area.

Tighten the filling valve nut with your hand.

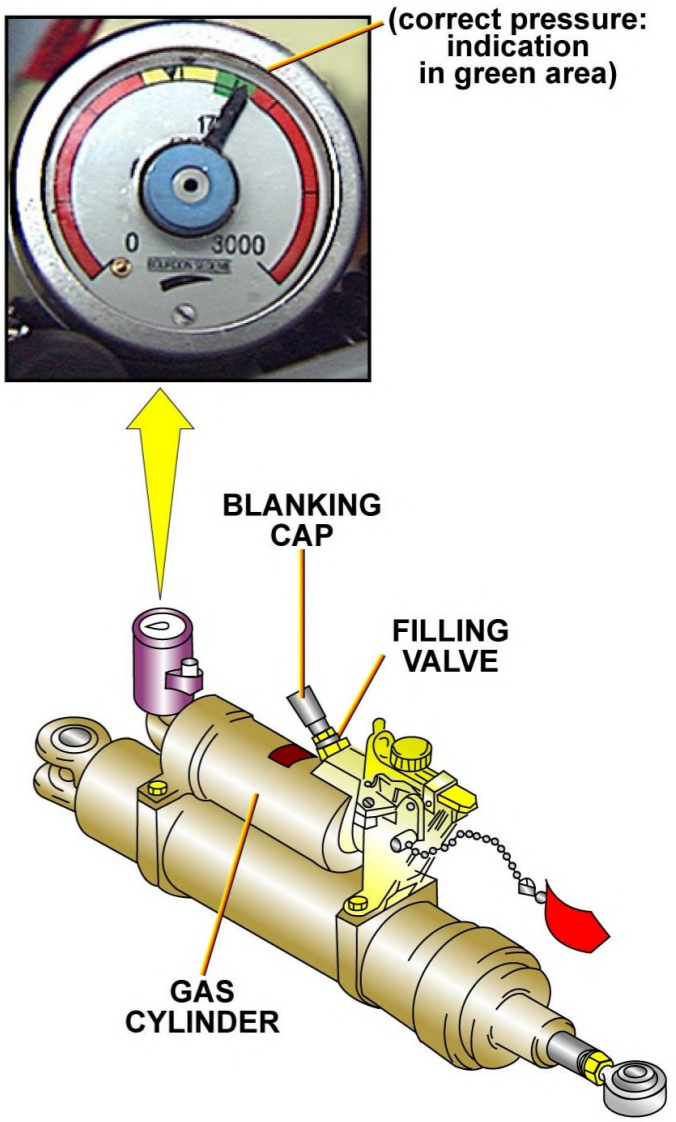
Remove the extension adapter from the filling valve when the pressure is stable.

Tighten the filling valve nut to the specified torque value.

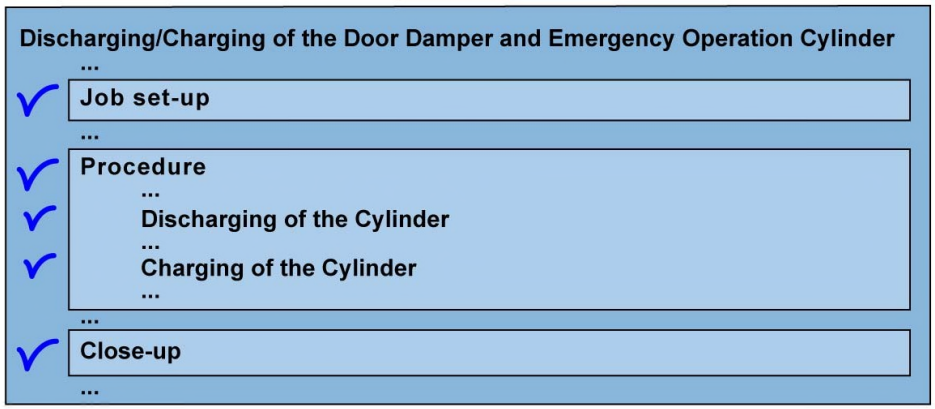
...

Close-up

...



DISCHARGING/CHARGING OF THE DOOR DAMPER AND EMERGENCY OPERATION CYLINDER


Discharging/Charging of the Door Damper and Emergency Operation Cylinder
...
Job set-up
...
Procedure
...
Discharging of the Cylinder
...
Charging of the Cylinder
...
...
Close-up
...

TASK COMPLETED

DOORS SYSTEM BASE MAINTENANCE (3)

REMOVAL OF THE DOOR SEAL

The AMM procedure is the same for all passenger / crew doors.
Make sure that the circuit breakers 2MJ and 3MJ are opened, safetied and tagged.
Remove the nuts.
Remove the screws and the four corner retainers.
Remove the screws and the retainers.
Remove the door seal from the passenger/crew door.
Put a warning notice on the door to warn people that the door seal has been removed.
The task has been completed.

Removal of the Door Seal

...

Job set-up

...

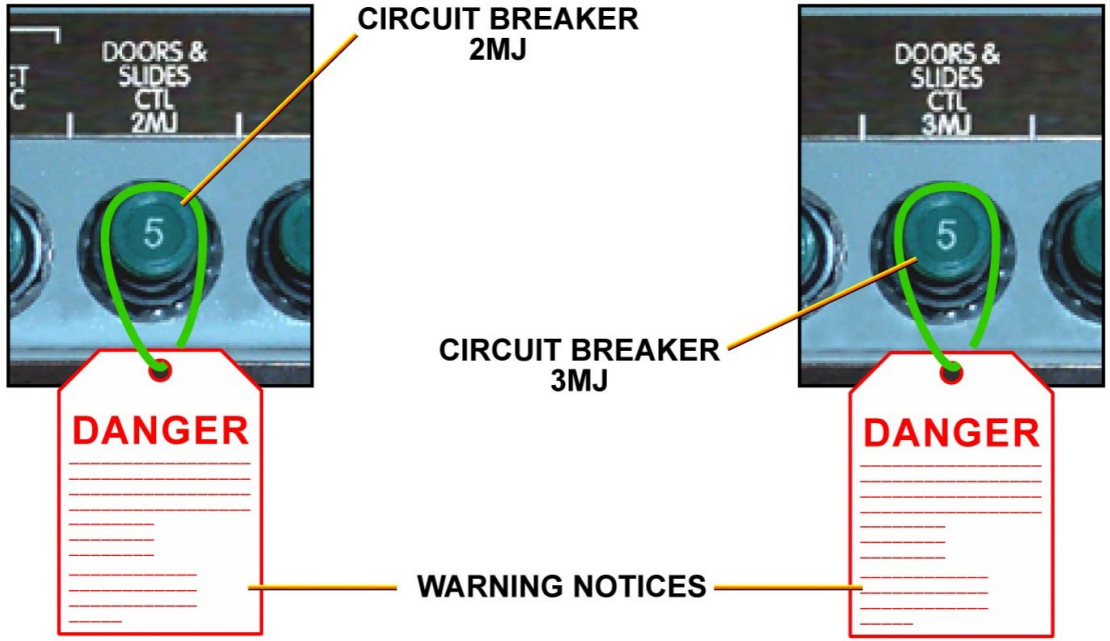
Open, safety and tag these circuit breakers:

721VU	DOORS &SLIDES CTL	3MJ	N12 (for A340)
721VU	DOORS &SLIDES CTL	3MJ	N12 (fro A330)
722VU	DOORS &SLIDES CTL	2MJ	P41

...

Procedure

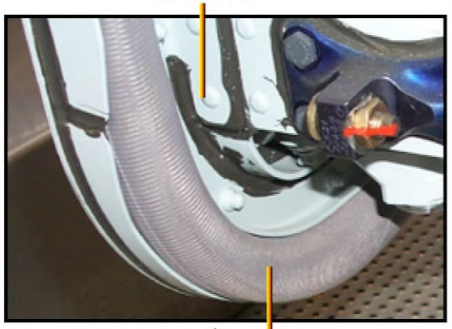
...

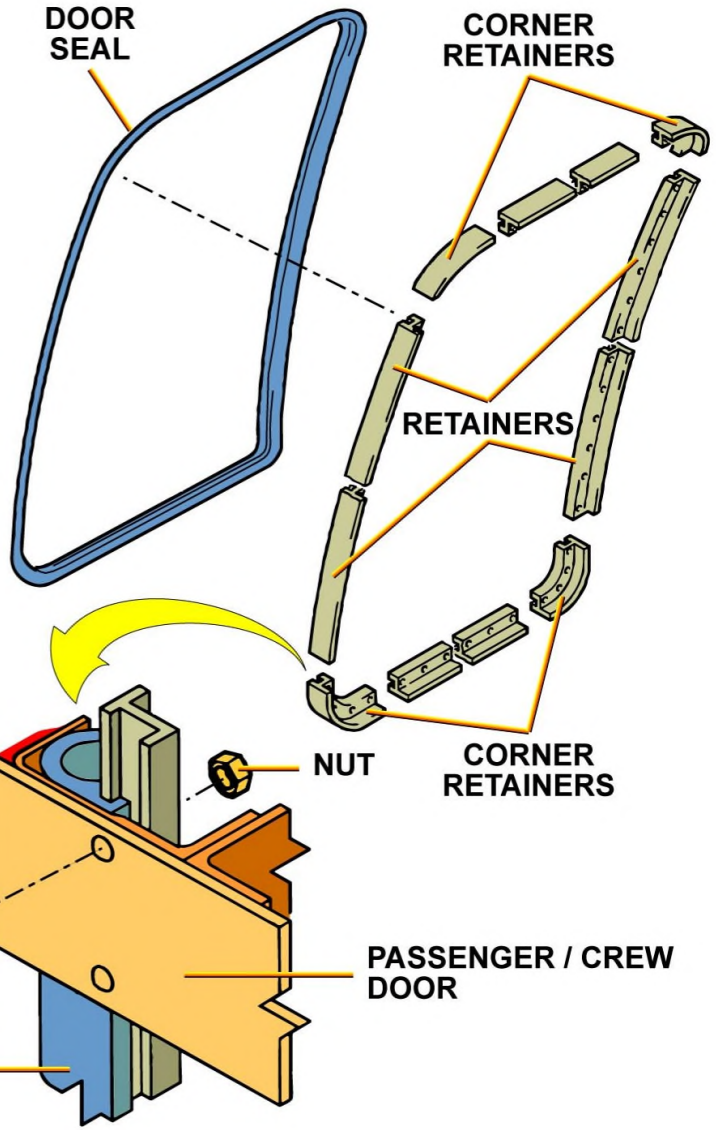


REMOVAL OF THE DOOR SEAL

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

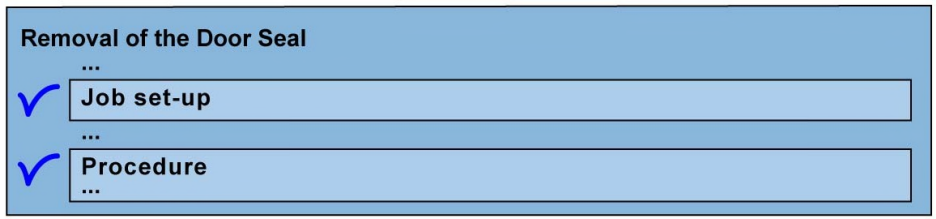
Removal of the Door Seal
...
Job set-up
...
Procedure
...
Remove the nuts.
Remove the screws and the four corner retainers.
Remove the screws and the retainers.
Remove the door seal from the passenger/crew door.
Put a warning notice on the door to warn people that the door seal has been removed.





REMOVAL OF THE DOOR SEAL

G7508471 - G3NT1T0 - FM52Y2BASEMCE02



TASK COMPLETED

REMOVAL OF THE DOOR SEAL

DOORS SYSTEM BASE MAINTENANCE (3)

INSTALLATION OF THE DOOR SEAL

The AMM procedure is the same for all passenger / crew doors.
Make sure that the circuit breakers 2MJ and 3MJ are opened, safetied and tagged.
Clean and do a visual inspection of the component interface and the adjacent area. Make sure that retainers are clean and in correct condition.
Clean the countersinks with a nonmetallic scraper and with adapted cleaning agents.
Put the door seal in position on the passenger/crew door.
Apply a SEALANT BEAD to the leading edge of the forward passenger door before you install the screws. Apply SEALANT on the screws and install them through the door.
Install the retainers, screws and nuts. Make sure the seal is correctly installed, then tighten the nuts to the specified torque value. Apply COMMON GREASE to the door seal. Remove the unwanted sealant from around the screw heads with a lint free cloth. Apply STRUCTURE PAINT to the nuts. Do a repair of any paint damage caused on the outer skin panel of the door by the removal / installation of screws.
Put the aircraft back to its initial configuration.
The task has been completed.

Installation of the Door Seal

...

Job set-up

...

Make sure that these circuit breakers are opened, safetied and tagged:

721VU	DOORS &SLIDES CTL	3MJ	N12 (for A340)
721VU	DOORS &SLIDES CTL	3MJ	N12 (for A340)
722VU	DOORS &SLIDES CTL	2MJ	P41

...

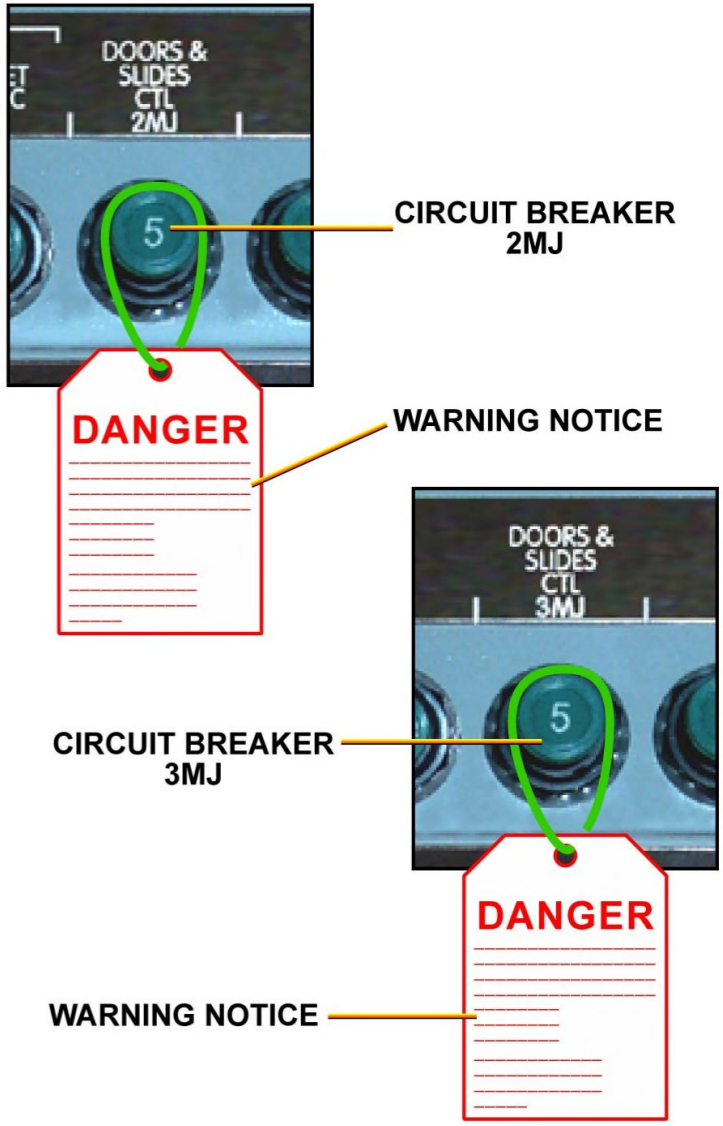
Clean the component interface and/or the adjacent area.
Do a visual inspection of the component interface and/or the adjacent area.
Make sure that the parts retained from the removed component are clean and in the correct condition.
Clean the countersinks with a nonmetallic scraper and CLEANING AGENTS.

Procedure

...

Close-up

...



INSTALLATION OF THE DOOR SEAL

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

Installation of the Door Seal

...

Job set-up

...

Make sure that these circuit breakers are opened, safetied and tagged:

721VU	DOORS &SLIDES CTL	3MJ	N12 (for A340)
721VU	DOORS &SLIDES CTL	3MJ	N12 (for A340)
722VU	DOORS &SLIDES CTL	2MJ	P41

...

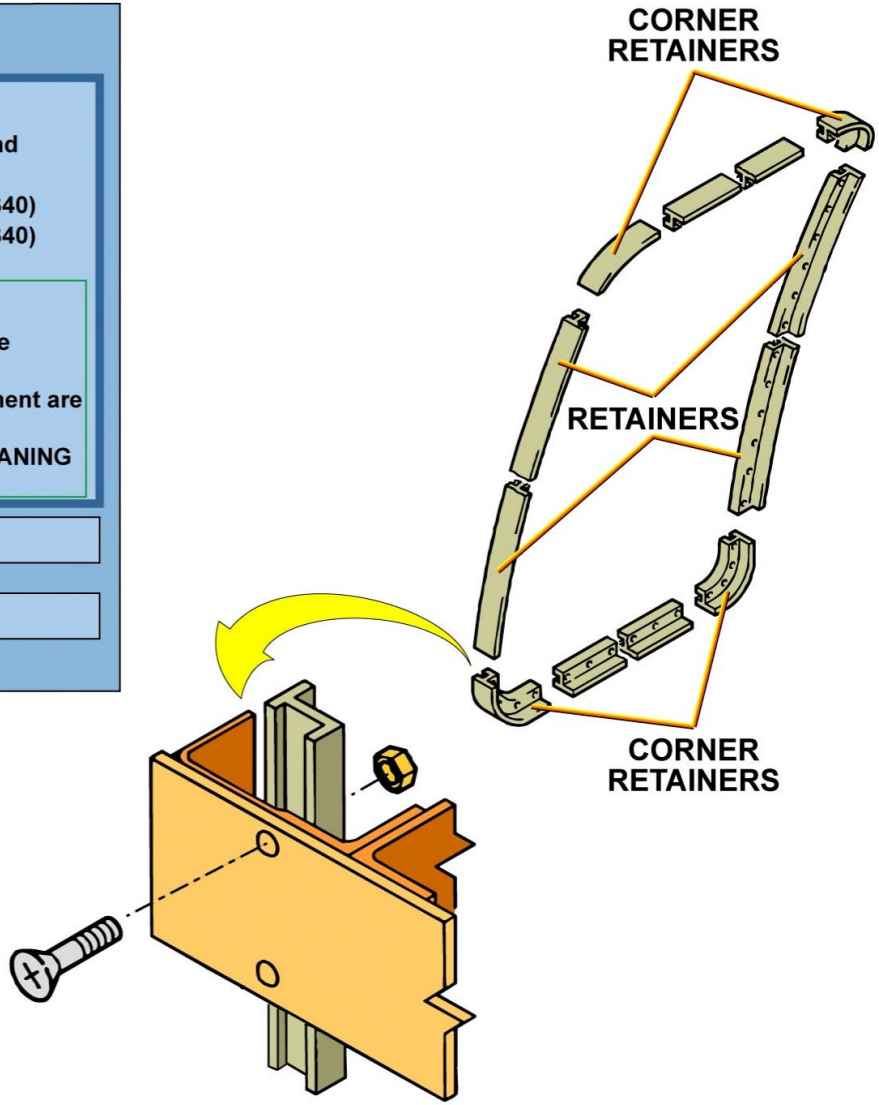
Clean the component interface and/or the adjacent area.
Do a visual inspection of the component interface and/or the adjacent area.
Make sure that the parts retained from the removed component are clean and in the correct condition.
Clean the countersinks with a nonmetallic scraper and CLEANING AGENTS.

Procedure

...

Close-up

...



INSTALLATION OF THE DOOR SEAL

Installation of the Door Seal

...

Job set-up

...

Procedure

...

Put the door seal in position on the passenger/crew door.

Apply a SEALANT bead to the leading edge of the forward pax door before you install the screws.

Apply an SEALANT on the screws and install through the door.

Install the retainers, screws and nuts.

NOTE: Make sure that the seal is installed correctly.

TORQUE tighten the nuts to the specified value torque.

Apply an COMMON GREASE to the door seal.

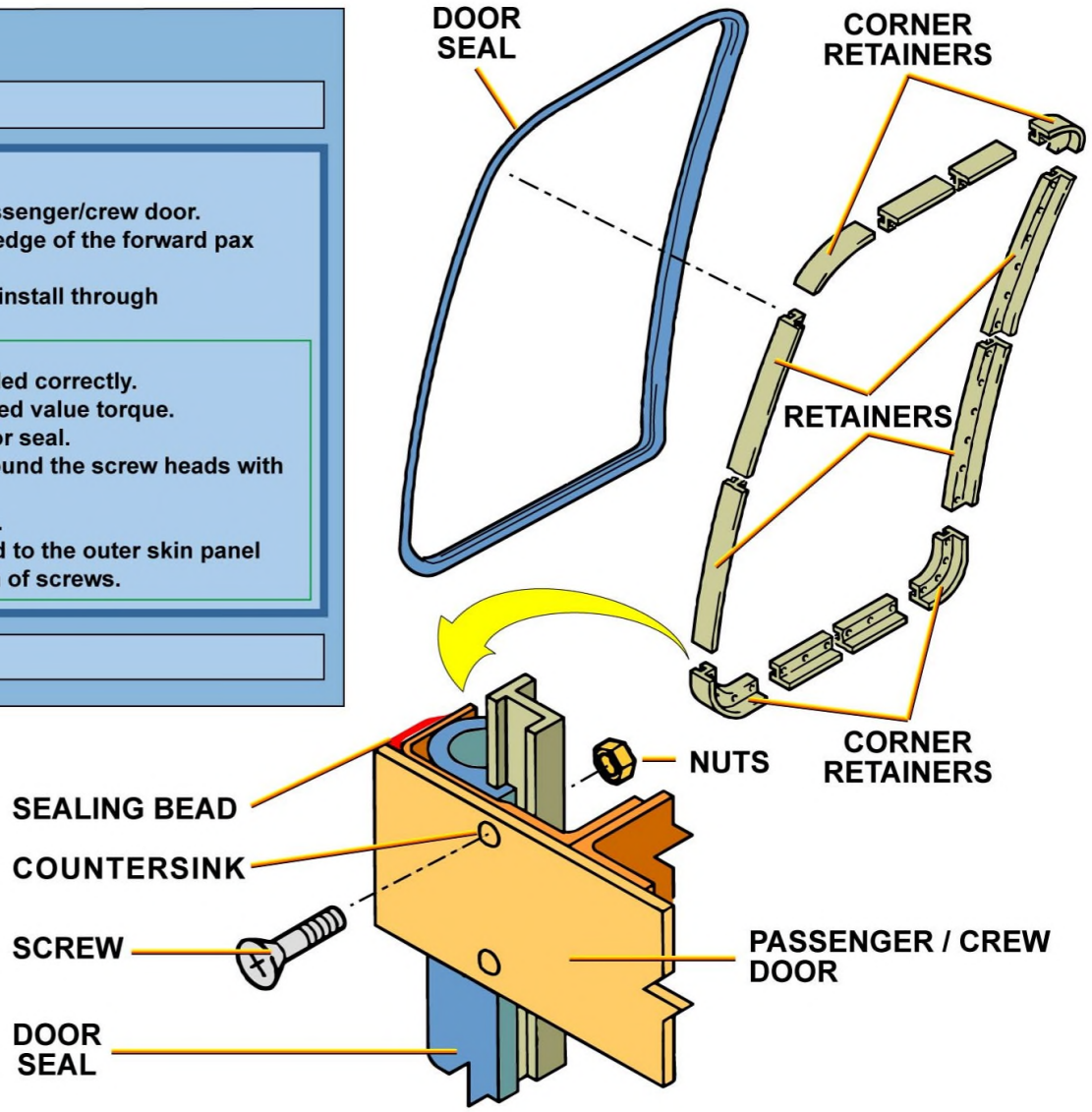
Remove the unwanted sealant from around the screw heads with a lint free cloth.

Apply STRUCTURE PAINTS to the nuts.

Do a repair of any paint damage caused to the outer skin panel of the door by the removal / installation of screws.

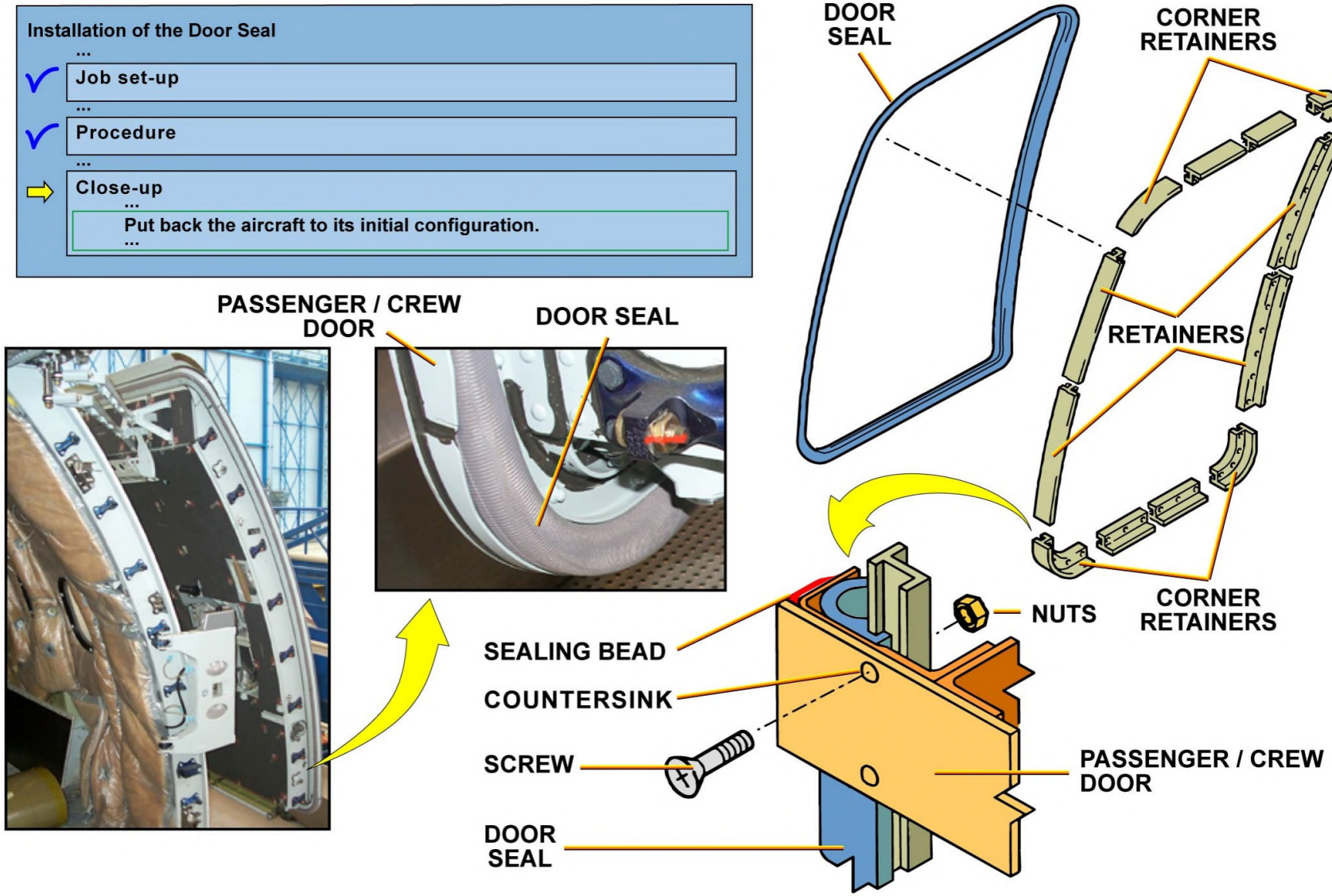
Close-up

...



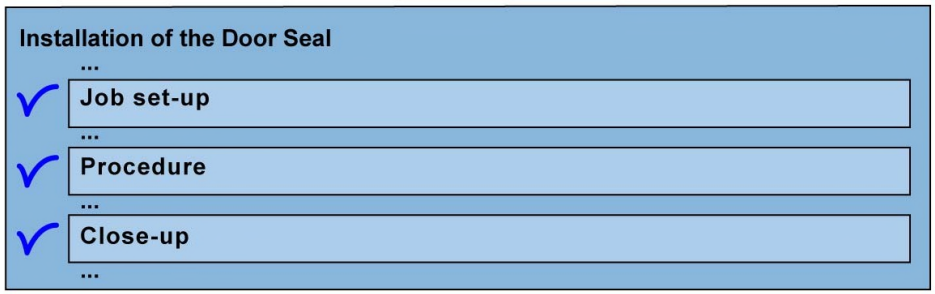
INSTALLATION OF THE DOOR SEAL

G7508471 - G3NT1T0 - FM52Y2BASEMCE02



INSTALLATION OF THE DOOR SEAL

G7508471 - G3NT1T0 - FM52Y2BASEMCE02


Installation of the Door Seal
...
Job set-up
...
Procedure
...
Close-up
...

TASK COMPLETED

DOORS SYSTEM BASE MAINTENANCE (3)

BITE TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

The BITE test of the Autonomous Standby Power Supply Unit (ASPSU) is operated from the built-in test panel.
Make sure that the circuit breakers 2MJ and 3MJ are closed.
To initiate the test, push the TEST P/B switch on the ASPSU. All Fault and OK LEDs come on.
After approximately 10 seconds the Fault LEDs go off and the OK LEDs stay on.
After approximately 1 minute, the test automatically ends and the OK LEDs go off.
The task has been completed.

BITE Test of the Autonomous Standby Power Supply Unit (ASPSU).

...

Job set-up

...

Make sure that the circuit breakers are closed:

721VU	DOORS &SLIDES CTL	3MJ	N12 (for A340)
721VU	DOORS &SLIDES CTL	3MJ	N09 (for A330)
722VU	DOORS &SLIDES CTL	2MJ	P41

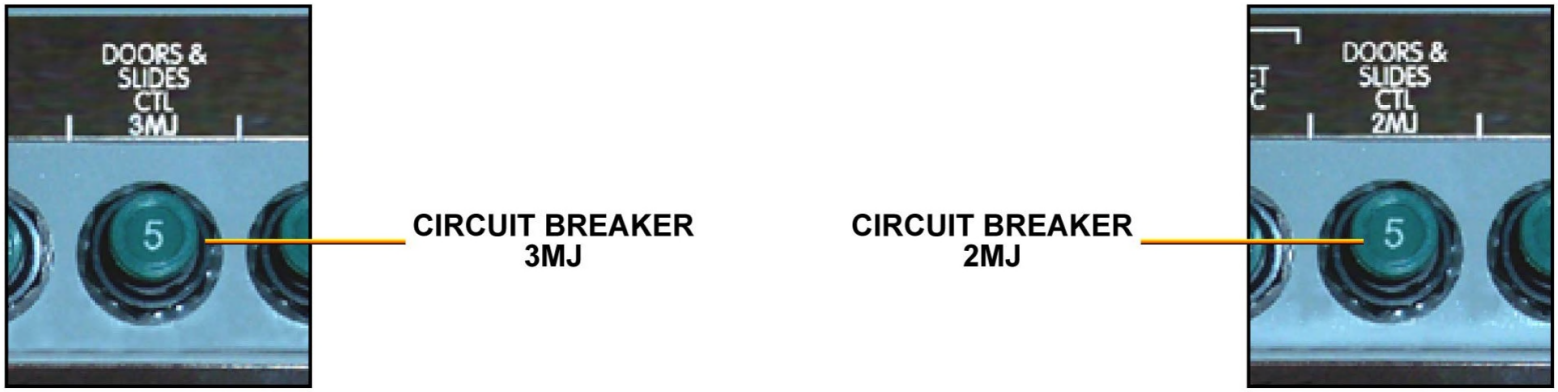
...

Procedure

...

Close-up

...



BITE TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

BITE Test of the Autonomous Standby Power Supply Unit (ASPSU).

...

Job set-up

...

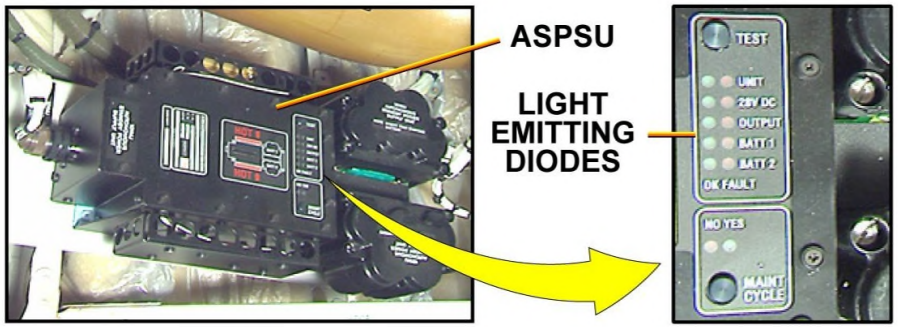
Procedure

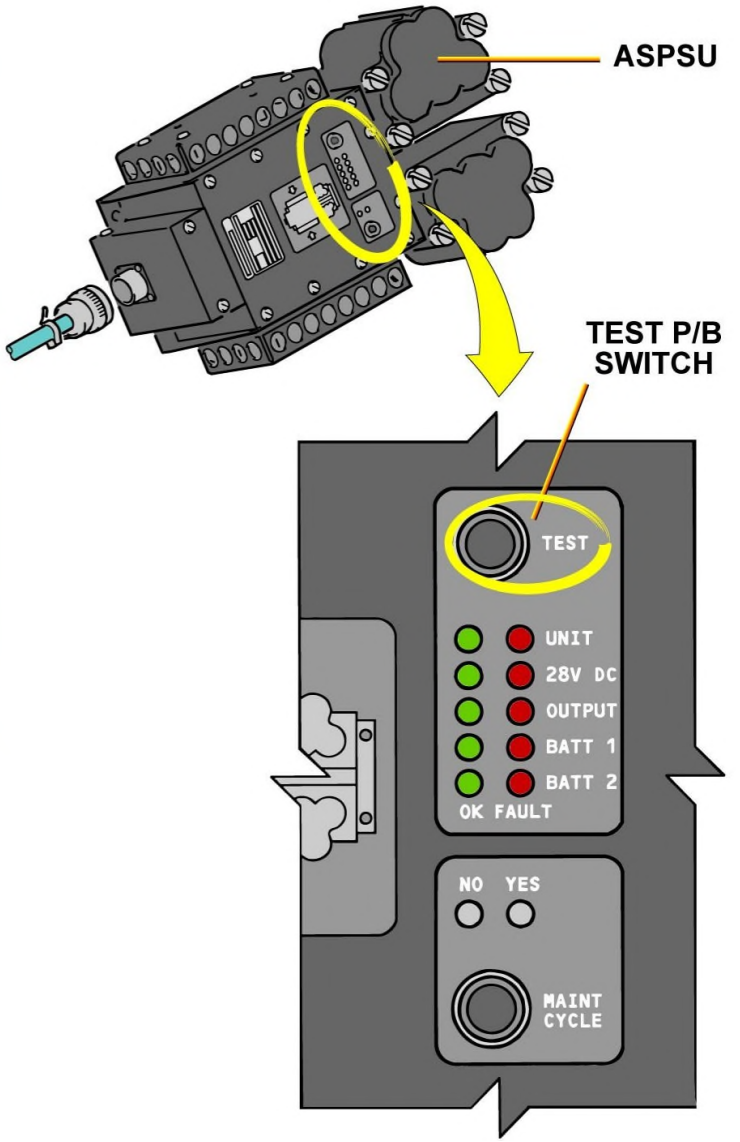
...

On the ASPSU: - push the TEST P/BSW.	On the ASPSU: - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 FAULT LEDs come on. - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 OK LEDs come on.
	After approx.10 s: - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 FAULT LEDs go off. - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 OK LEDs stay on.
	After approx.1 minute (when the test is automatically ended): - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 OK LEDs go off.

Close-up

...





BITE TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

BITE Test of the Autonomous Standby Power Supply Unit (ASPSU).

...

Job set-up

...

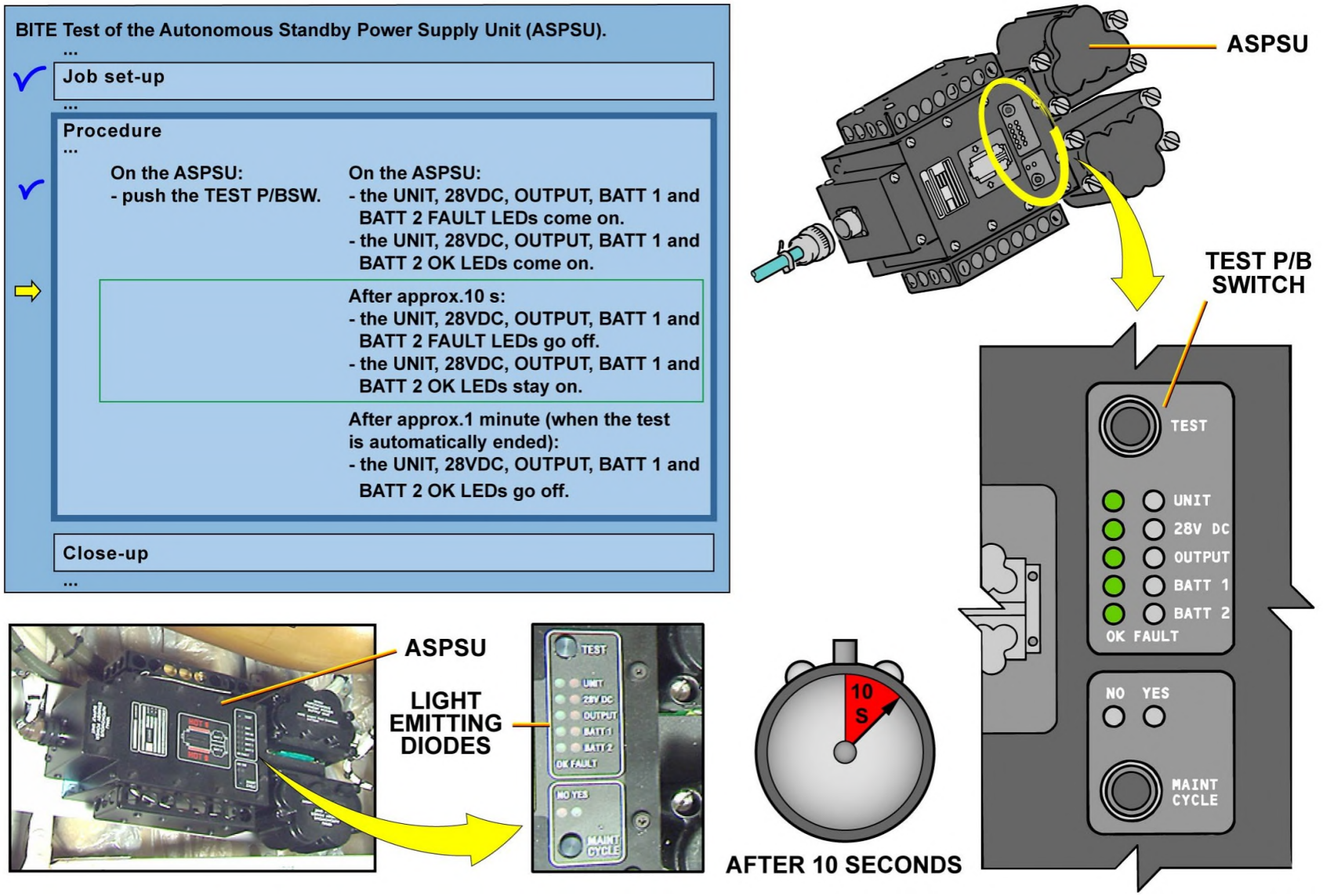
Procedure

...

On the ASPSU: - push the TEST P/BSW.	On the ASPSU: - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 FAULT LEDs come on. - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 OK LEDs come on.
	After approx.10 s: - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 FAULT LEDs go off. - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 OK LEDs stay on.
	After approx.1 minute (when the test is automatically ended): - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 OK LEDs go off.

Close-up

...



BITE TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

BITE Test of the Autonomous Standby Power Supply Unit (ASPSU).

...

Job set-up

...

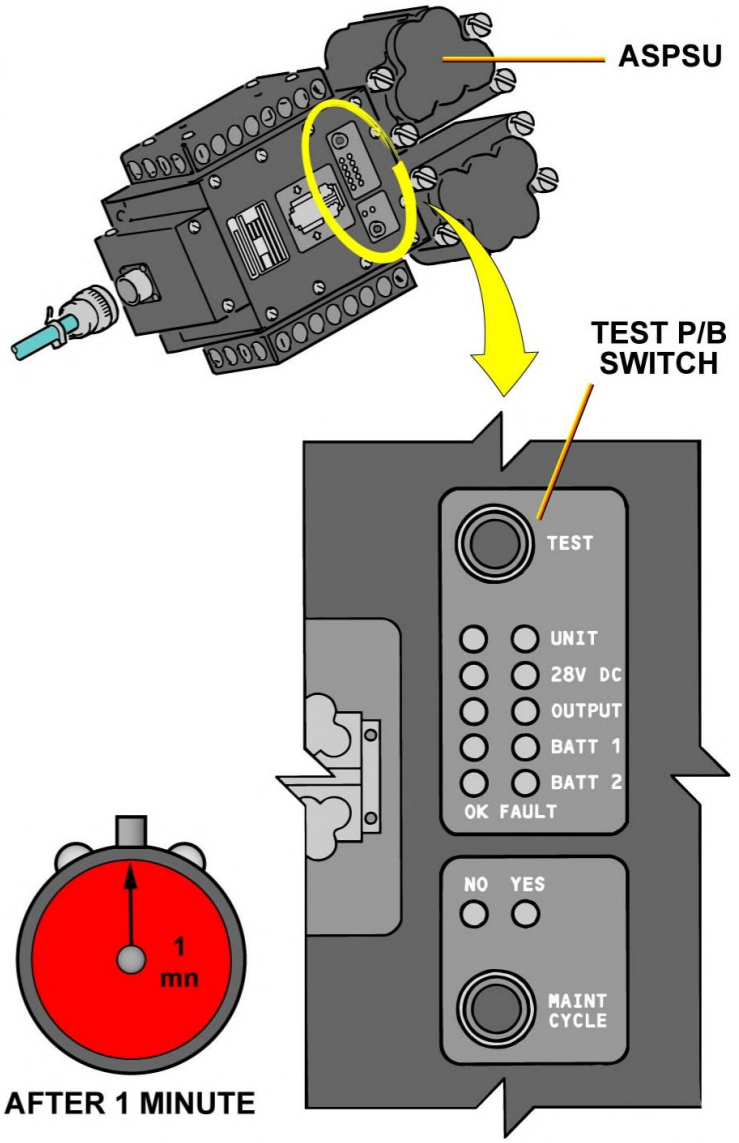
Procedure

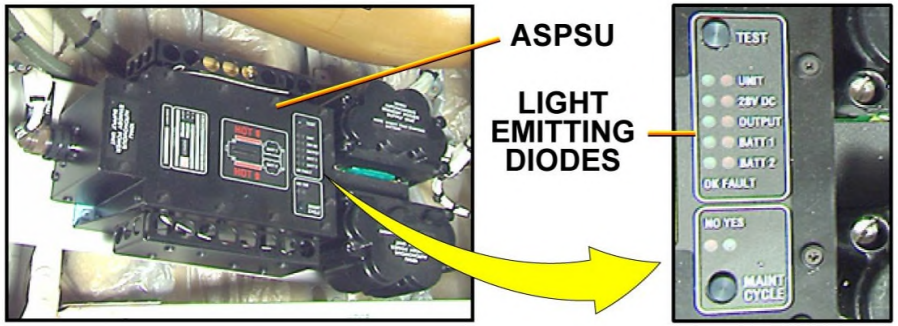
...

On the ASPSU: - push the TEST P/BSW.	On the ASPSU: - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 FAULT LEDs come on. - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 OK LEDs come on.
	After approx.10 s: - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 FAULT LEDs go off. - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 OK LEDs stay on.
	After approx.1 minute (when the test is automatically ended): - the UNIT, 28VDC, OUTPUT, BATT 1 and BATT 2 OK LEDs go off.

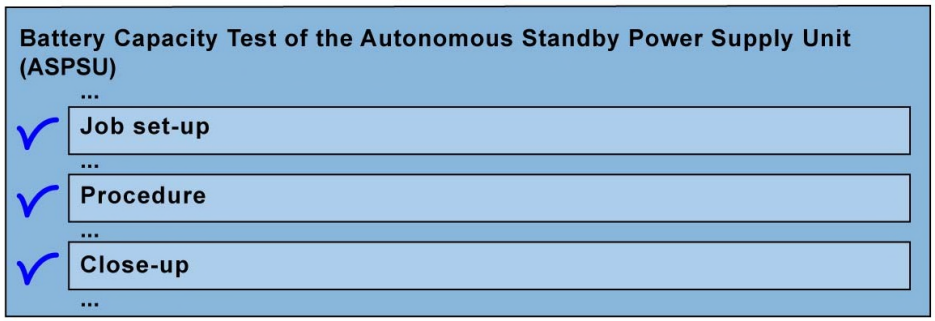
Close-up

...





BITE TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)



BITE TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

DOORS SYSTEM BASE MAINTENANCE (3)

BATTERY CAPACITY TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

The Battery Capacity test of the ASPSU is operated from the built-in test panel.
Make sure that the circuit breakers 2MJ and 3MJ are closed.
To initiate the test, push both TEST P/B and MAINT CYCLE P/B switches on the ASPSU. The BATT 1 and BATT2 Fault and OK LEDs come on.
After approximately 3 hours, the BATT 1 and BATT2 Fault LEDs go off and the BATT 1 and BATT2 OK LEDs stay on.
To end the test, push both TEST P/B and the MAINT CYCLE P/B switches on the ASPSU. The BATT 1 and BATT2 OK LEDs go off.
The task is complete.

Battery Capacity Test of the Autonomous Standby Power Supply Unit (ASPSU).

...

Job set-up

...

Make sure that the circuit breakers are closed:

721VU	DOORS &SLIDES CTL	3MJ	N12 (for A340)
721VU	DOORS &SLIDES CTL	3MJ	N09 (for A330)
722VU	DOORS &SLIDES CTL	2MJ	P41

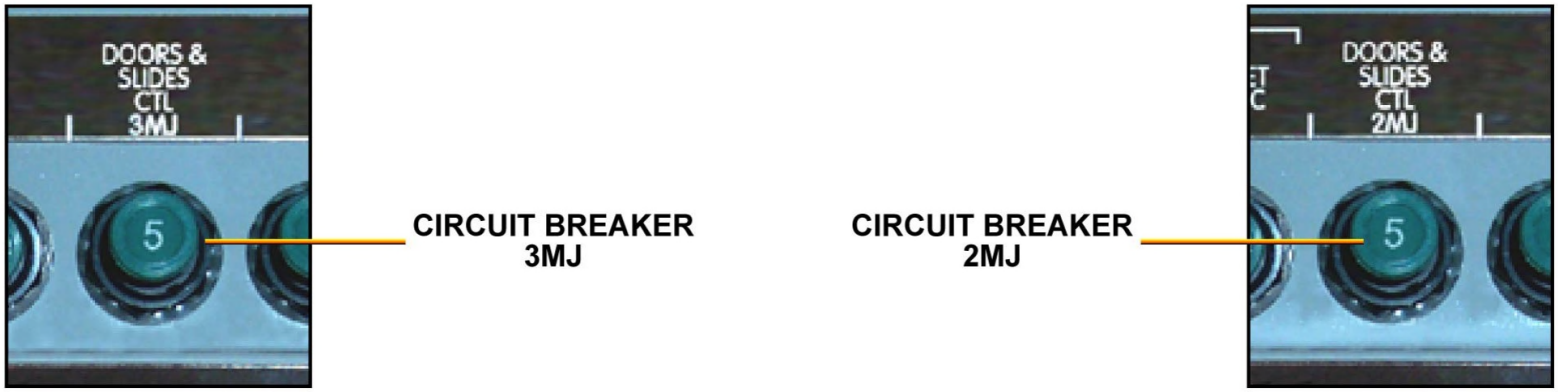
...

Procedure

...

Close-up

...



BATTERY CAPACITY TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

Battery Capacity Test of the Autonomous Standby Power Supply Unit (ASPSU)

...

Job set-up

...

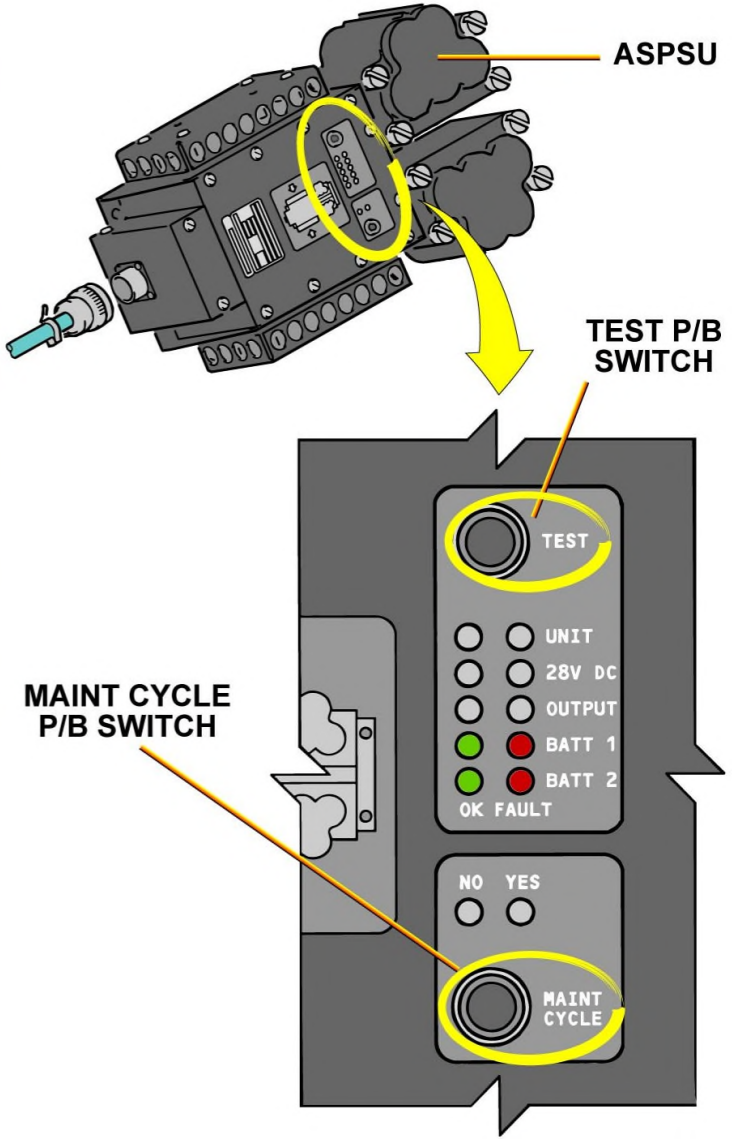
Procedure

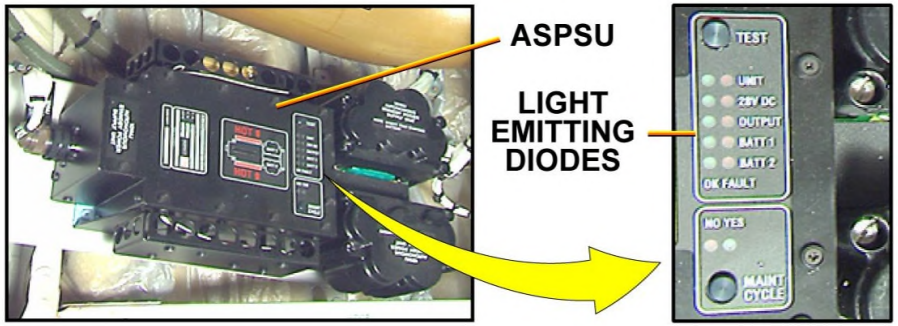
...

On the ASPSU: - push the TEST P/BSW together with the MAINT CYCLE P/BSW.	On the ASPSU: - the BATT 1 and BATT 2 FAULT LEDs come on. - the BATT 1 and BATT 2 OK LEDs come on.
	After approx. 3 hrs: - the BATT 1 and BATT 2 FAULT LEDs go off. - the BATT 1 and BATT 2 OK LEDs stay on.
- push the TEST P/BSW together with the MAINT CYCLE P/BSW.	- the BATT 1 and BATT 2 OK LEDs go off.

Close-up

...





BATTERY CAPACITY TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

G7508471 - G3NT1T0 - FM52Y2BASEMCE02

Battery Capacity Test of the Autonomous Standby Power Supply Unit (ASPSU)

...

Job set-up

...

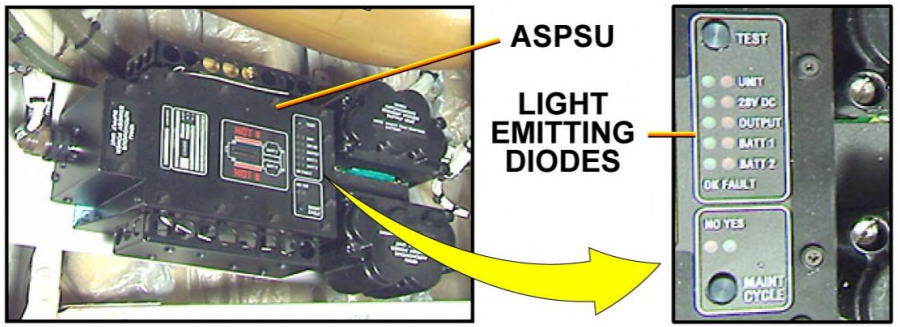
Procedure

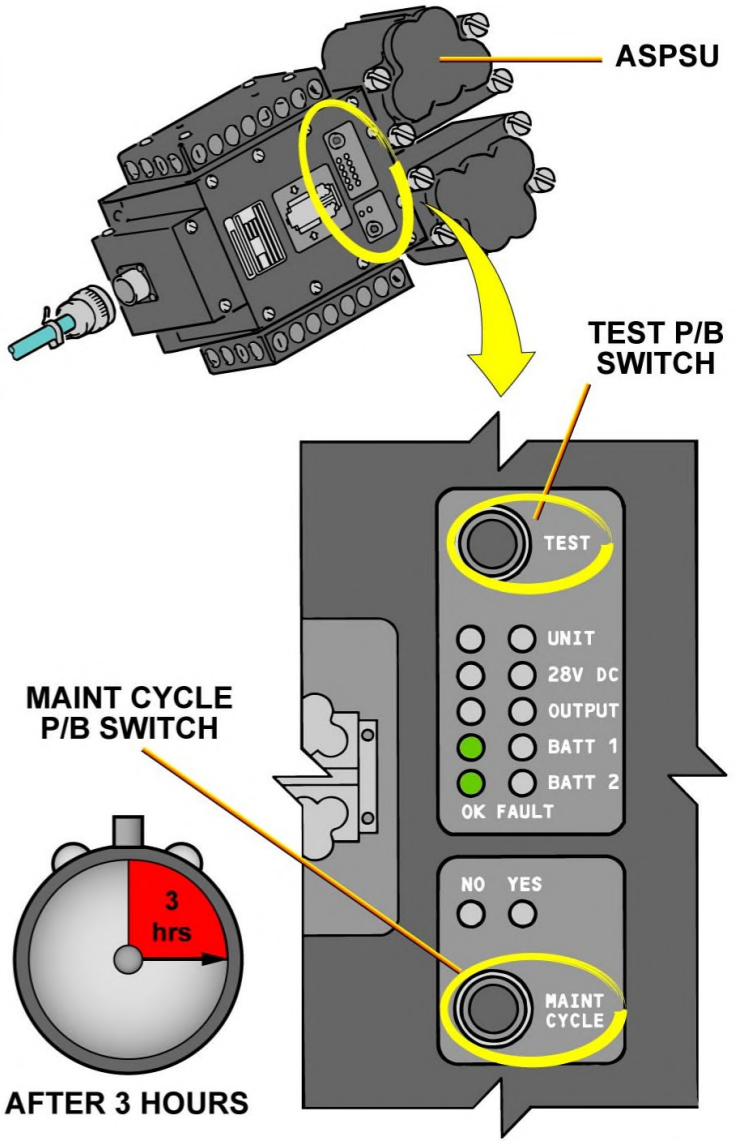
...

On the ASPSU: - push the TEST P/BSW together with the MAINT CYCLE P/BSW.	On the ASPSU: - the BATT 1 and BATT 2 FAULT LEDs come on. - the BATT 1 and BATT 2 OK LEDs come on.
	After approx. 3 hrs: - the BATT 1 and BATT 2 FAULT LEDs go off. - the BATT 1 and BATT 2 OK LEDs stay on.
- push the TEST P/BSW together with the MAINT CYCLE P/BSW.	- the BATT 1 and BATT 2 OK LEDs go off.

Close-up

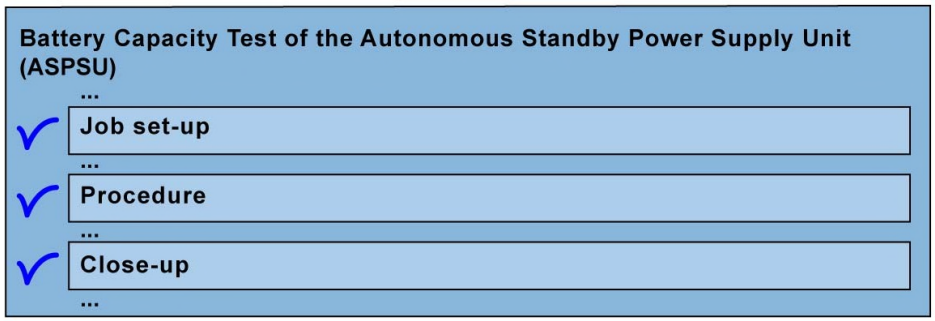
...





BATTERY CAPACITY TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

G7508471 - G3NT1T0 - FM52Y2BASEMCE02



TASK COMPLETED

BATTERY CAPACITY TEST OF THE AUTONOMOUS STANDBY POWER SUPPLY UNIT (ASPSU)

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G7508471 - G3NT1T0 - FM52Y2BASEMCE02

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